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A Survey of the Production, Utilization and Marketing of Livestock and Livestock Products in Lesotho

Brent M. Swallow, 'Mabaitsi Motsamai, Limpho Sopeng
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by

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Institute of Southern African Studies
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Research Report No. 17

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AUTHORS

Brent M. Swallow is Research Fellow, Institute of Southern African Studies, National University of Lesotho and Research Associate, University of Saskatchewan; 'Mabaitsi Motsamai is Head, Marketing Section, Research Division, Lesotho Ministry of Agriculture and Marketing; Limpho Sopeng is Research Assistant, Institute of Southern African Studies, National University of Lesotho; Ray F. Brokken is formerly Marketing Specialist, Washington State University Farming Systems Research Project, Research Division, Ministry of Agriculture and Marketing; and Gary G. Storey is Professor, Department of Agricultural Economics, University of Saskatchewan.

PREFACE

The research reported below was undertaken under the joint institutional auspicies of the Institute of Southern African Studies at the National University of Lesotho, and the Research Division of the Lesotho Ministry of Agriculture and Marketing. Two research projects, operating jointly but under seperate institutions and funding, provided most of the support and guidance for the research. At the Institute of Southern African Studies the research was conducted as part of the Agricultural Marketing Research Project. At the Ministry of Agriculture and Marketing the research was supported with both personnel and resources provided by the Farming Systems Research Project.

The Agricultural Marketing Research Project at the Institute of Southern African Studies is a three-year project which began in September 1984 and is scheduled to continue until August 1987. The project is being conducted jointly by the University of Saskatchewan in Canada and the National University of Lesotho with funding provided by the International Development Research Centre (Canada). Brent M. Swallow is the Project Leader, Limpho Sopeng is a Research Assistant, and Gary G. Storey is the Project Supervisor.

The Farming Systems Research Project was a seven-year project which began in July 1979 and ended in June 1986, based at the Research Division of the Ministry of Agriculture and Marketing. The Project was conducted by Washington State University and the Ministry of Agriculture with external funding provided by the United States Agency for International Development, Contract No. AID/afr-1517. 'Mabaitsi Motsamai is the Head of the Marketing Section of the Research Division, and Ray F. Brokken was the Marketing Specialist with the Project between June 1984 and October 1986.

Both the Agricultural Marketing Research Project and the Marketing Specialist with the Farming Systems Research Project arrived in Lesotho with some mandate to conduct research into the marketing of livestock and livestock products. From a review of relevant conceptual literature, however, it quickly became apparent that to analyze marketing, it is necessary to also understand production and utilization as interdependent components of a single livestock system. None of the researchers felt that adequate analysis of the Lesotho livestock system had been completed to date. The idea of a broad research project on the production, utilization and marketing of livestock and livestock products was a natural result.

The three principal researchers received enthusiastic support from their supporting institutions. Involvement by the Agricultural Marketing Research Project was supported by the Project's Steering Committee and by the International Development Research Centre. The Marketing Specialist and the Head of the Marketing Section at the Research Division were supported by both the Ministry of Agriculture and Marketing, and the Washington State Farming Systems Research Project. In addition, key support for field research costs was provided by a research grant provided by the Southern African Centre for Cooperation in Agricultural Research (SACCAR), with funding from the Swedish Agency for Research Cooperation

with Developing Countries.

It was decided that the research should centre around a survey of livestock owners. Within the constraints imposed by financial, personnel and temporal limitations, the survey was designed to be as geographically representative of the whole of Lesotho as possible. The questionnaire was designed to solicit information on a variety of components of the livestock enterprises so that a number of hypotheses could be tested and a number of objectives met. The result was a long questionnaire administered to 537 livestock-owning households located in 18 cluster areas scattered across all five of Lesotho's geo-climatic zones, and nine of its ten districts.

Preliminary results of the survey have already been published in three different reports. Cattle Marketing in Lesotho (Swallow, Mokitimi and Brokken 1986) presents data on the marketing channels for cattle purchases and sales utilizied by the surveyed households. Lesotho Hides and Skins Marketing Symposium (Motsamai and Brokken 1986) presents data on farmer curing, utilization and marketing of hides and skins from both fallen and slaughtered animals. The Economics of Wool and Mohair Production and Marketing in Lesotho (Hunter 1987) presents detailed analysis of the sheep and goat management, and wool and mohair clipping and marketing practices of the surveyed households.

Given the amount of useful data generated by the survey, it was decided that this report would be restricted to three components. The first part of the report briefly describes the research problem, hypotheses, objectives and research methods which guided the survey research. The second part is a summary tabulation of survey results. The survey results are divided into twenty sections with each section containing a number of tables. The salient points from the tables are summarized for each section. The third part of the report is an English translation of the Sesotho questionnaire.

This report should be read with its companion report entitled, Livestock Development and Range Utilization in Lesotho. That report describes in more detail the problem setting and the conceptual model which are the foundation on which the research was built. Some data from the survey are analyzed through such techniques as enterprise budgets. The various hypotheses are tested and conclusions drawn. Alternative livestock development and range management programmes are evaluated, and recommendations for future policies and programmes are made.

ACKNOWLEDGEMENTS

A research project of this magnitude could not have been successfully undertaken without the cooperation and support of a number of institutions and individuals. The supporting institutions include: the Institute of Southern African Studies at the National University of Lesotho; the University of Saskatchewan; the International Development Research Centre (Canada); the Research Division of the Lesotho Ministry of Agriculture; Washington State University; the United States Agency for International

Development; the Southern African Centre for Cooperation in Agricultural Research; and the Swedish Agency for Research Cooperation with Developing Countries. All expressed opinions, conclusions and recommendations are the authors', not the funding agencies', nor any governments'.

Pre-survey phase -- C. Fritsch, F. Ronsholt, M. Tshabalala, J. Hunter, W. Ntse`khe, 'M. Ntoanyane, S. Lawry, S. Turner, John Gay and Judith Gay all provided useful comments on the questionnaire. L. Hesling helped with the sampling procedure. N. Mokitimi, M. Mpemi and N. Moletsane all assisted in the translation of the questionnaire from English to Sesotho. Dee O'Brian typed both the English and Seotho versions of the questionnaire. The people of the Nyakasoba areas agreed to be subjects for the pre-testing of the questionnaire.

Survey phase -- A long list of District Commissioners, District Agricultural Officers, Local Administrative Officers, District Livestock Officers, Principal Chiefs, Ward Chiefs, and Village Headmen were all indispensible in the assistance they provided in arranging interviews and accomodation in each of the 18 cluster areas surveyed. N. Moletsane, K. Sefeane, K. Khiba, T. Molosiwa, M. Theko, J. Duru, L. Ranko, J. Moletsane, and B. Mashologu were the very capable enumerators.

Coding phase -- L. Moahi, M. Mkhonto, J. Moletsane, S. Shale, 'M. Ramotholi, R. Thakholi, M. Mothetho, M. Masoetsa, 'M. Sekhesa, H. Mochochoko, and B. Mashologu all helped code the data from the questionnaires onto computer code sheets. I. Bermudas and A. Kanagasurium entered the data from the code sheets into IBM-compatable micro-computers using the programme EDLIN.

Analysis phase -- L. Cawley and J. Hunter worked long and hard as data analysts to shape the raw data into SPSS system files and performed preliminary analysis (see the Variable Dictionary by Sopeng et. al. 1986). A. Kanagasurium and I. Bermudas entered the necessary computer programmes and helped re-enter the data when necessary.

Compilation phase -- M. Tate typed the first draft of the tables and G. Hunt helped print those tables. B. Buberwa helped type and print the final draft of this report.

D. Brokken, J. Tomkins and M. Forbes put up with endless conversations about cows over the past two years.

The final word of thanks must go to the 537 households in 52 villages who sat through the long and tedious interviews with amazing patience to provide the requested detail on their livestock enterprises.

All errors and ommissions remain the sole the responsibility of the authors.

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PART A

RESEARCH PROBLEM AND PROCEDURE

1. Research Problem

In Lesotho most livestock are raised under extensive production conditions with very low levels of management and supplementary feed inputs. Nutrition for the large populations of cattle, sheep, goats, horses and donkeys is primarily provided by forage grazed from communally-managed grazing land in a production-utilization-marketing system which has changed little since the beginning of the twentieth century. Future changes in the system may be necessary, however, to boost productivity in the short term. In the long term changes may be required to avert ecological collapse of the range resource.

Over the past fifty years a series of authors have heightened awareness of the long term negative consequences of misuse of range resources. Continued overstocking of grazing land is causing an encroachment of unpalatable forage species, decreases in the vegetative cover, and increases in the amount of barren rock. Recent estimates of the carrying capacity of Lesotho's rangeland vary from 147,182 to 630,000 animal units, compared to a current livestock population of 1,210,106 animals units. Large reductions in the livestock populations are thus seen to be necessary to arrest range degradation and promote range improvement.

Whether Lesotho is one hundred percent or seven hundred percent overstocked is a matter of considerable debate. What is commonly agreed, however, is that the overstocking situation is severe and is resulting in degradation of the range resource.

Why do Basotho stockowners graze more animals than can be supported without range degradation? How can these same stockowners be demonstrated the negative consequences of their overgrazing and be enticed to keep less animals? What should be done to reduce the number of animals while simultaneously increasing the productivity of each remaining animal? These are the three questions which dominate the livestock and range development debate in Lesotho. A correct answer to the first question is a necessary prerequisite to answers to the second and third. All three questions must be well-answered for appropriate livestock development policies and programmes to be developed. It is these three questions which thus served to guide the current research effort.

Until recently most authors writing about Basotho stockowners characterized them as traditional subsistence-oriented peasants who place great value on their livestock for meeting social requirements and for prestige. Livestock are viewed as a store of wealth by their owners which are only sold to meet pressing cash needs, these authors further state. Basotho must be introduced to the idea that their livestock are marketable commodities. Livestock development and reductions in the stocking rate are thus proported to be the desirable consequences of marketing programmes.

With all that has been written about Basotho stockowners and the factors which motivate them, very little in-depth research has actually been conducted to test the various hypotheses. Little work has been done to develop an integrated conceptual framework of the livestock / range complex to guide policy makers.

2. Hypotheses

Arising from the preceeding observations, and a review of relevant conceptual and descriptive literature, are the following hypotheses:
1) Economic factors dominate social and cultural factors in determining how and why Basotho own and manage their livestock;
2) Basotho stockowners view their livestock as capital assets, and as capital assets livestock generate returns competitive with other available investments;
3) The overstocking of Lesotho's rangeland is consistent with individual decision making based on economic criteria;
4) The system of communal tenure of rangeland with private ownership of animals is the main cause of current overstocking;
5) Mafisa and sharecropping are flexible institutions for allowing individual households to maximize their production of crop and livestock products;
6) Marketing channels which link stockowners are more important than other more formal marketing channels; and
7) Much of the meat and offal on the carcasses of fallen animals is consumed.

3. Objectives

The overall objective of this research project is to provide public and private decision makers in Lesotho with economic insights critical to the development of the livestock / range complex. A number of sub-objectives include the following:
1) Develop an integrated conceptual model of the Lesotho livestock / range complex;
2) Examine the interrelationships between land tenure, labour, capital and organizational constraints and their effects on stock-holding behaviour;
3) Determine the relative importance of economic, biological, sociological and ecological variables key to the decision making of Basotho stockowners and likely responses to changes in those variables;
4) Examine the importance of animal draught power in the stockholding behavior of Basotho and in making meaningful offtake comparisons and analyses;
5) Examine the utilization of animals dying from natural causes;
6) Determine the relative importance of the alternative marketing channels for livestock and livestock products; and
7) Prescribe policy appropriate to the meeting of development objectives in the livestock sector.

4. Research Method

To test the preceeding hypotheses and meet the preceeding objectives, the following research methods were utilizied. Firstly, relevant Lesotho literature was reviewed. Secondly, conceptual literature on livestock development from Africa, Latin America and elsewhere was reviewed in a search for an appropriate conceptual framework to guide the research. On the basis of that review the capital asset model was judged to be the most appropriate. Not only has the model proven to be appropriate in many regions throughout the world (including Zimbabwe and Botswana), but its general nature allows analysts to incorporate many other perspectives as variants.

Given the lack of basic descriptive information about the livestock industry in Lesotho, it was decided that a survey of production, utilization and marketing of livestock and livestock products was in order. The population of the survey was livestock-owning households in rural Lesotho. For the purpose of this research livestock is defined to include only cattle, sheep, goats, horses and donkeys. Designated urban areas and the areas covered by the Mphaki and Sehlabathebe Projects were omitted from the population.

Development of the questionnaire preceeded as follows. First, a series of background papers were prepared summarizing the Lesotho problem situation and the relevant literature. From these papers an outline of the questionnaire was prepared. Third, a draft questionnaire was prepared in English and circulated for review. The redrafted questionnaire was then translated into Sesotho and again reviewed before pretesting.

Students from the National University of Lesotho were employed as enumerators and trained for a period of four days in the classroom before they were taken to the Nyakasoba area for further pretesting of the questionnaire.

In selection of the sample, much attention was paid to representation of all geo-climatic zones -- mountains, foothills, lowlands and Senqu River Valley. The mountain zone was further sub-divided into remote and less remote (remote denoting inaccessibility by road) and the lowlands sub-divided into northern and southern lowlands. These gave us six strata (see figure A.1). The sampling frame chosen was the 1976 Population Census statistical enumeration areas. Three Enumeration Areas (EAs) were chosen randomly from each of the six strata bringing the total number of EAs surveyed to 18 (see figure A.2). Each enumeration area chosen contained more than one village. The 1976 Population Census Report listed the EAs by villages and by population so a procedure called population proportional sampling was then used to choose the villages to be surveyed within each EA. Lists of all households in the selected villages were then assembled by the office of the local village chiefs. A random number table was used to select households to be surveyed from these lists. Only households that owned some the cattle, sheep, goats, horses or donkeys were interviewed. If a randomly selected household wasw found to have no livestock, that household was abandoned and replaced by another. Approximately thirty livestock owning households were interviewed in each anumeration area for a total of 537 households.

Figure A.1 Geo-climatic Regions of Lesotho

A great deal of attention was paid to observing proper protocol in the districts as well as in the villages. In each district, the District Agricultural Officer and the District Commissioner were written introductory letters and paid visits in advance of the arrival of the survey team. The District Secretaries usually wrote letters to relevant Principal Chiefs who in turn wrote letters to the Village Chiefs whose villages were going to be surveyed. Personnel in the District Agricultural Offices were very helpful in arranging meetings with the local chiefs. Accommodation for the team of enumerators was generally arranged by the local chiefs.

The survey work started on June 24, 1985 in the northern lowlands of Berea District. There we surveyed 9 villages, then moved to the lowland region of Maseru District where 2 villages were surveyed. While in Maseru District we went to the mountain region of in the vicinity of Semonkong where we surveyed 8 villages. From Semonkong we went to the southern lowlands in Mafeteng District, where 7 villages were surveyed, then moved on to the foothill and mountain areas of Mohale's Hoek District and surveyed 9 villages. We then proceeded to Quthing and Qacha's Nek Districts where we surveyed 4 villages along the Orange River Valley. From there we went to 4 villages in the Thaba-Tseka District (mountain zone), where some of the villages were quite remote. We then went to Mokhotlong which is in the mountain zone, and surveyed 3 villages. Finally we went to another part of Qacha's Nek District along the Orange River Valley, where we surveyed 3 villages. Approximately 3 days were spent in each enumeration area. The survey was completed in September 1985 (see table A.1).

Once all of the questionnaires were administered, coding of the data by a team of twelve coders commenced. Data from the code sheets were entered into IBM-compatible micro-computers using EDLIN. The raw data was then combined with SPSS/PC+ programmes to create SPSS/PC+ system files. Analysis of data was conducted on an IBM-compatible columbia micro-computer located at the Research Division of the Ministry of Agriculture Cooperatives and Marketing.

In Part B of this report a summary tabulation of survey results is presented. Part C is an English translation of the questionnaire which was administered. In the companion report, Livestock Development and Range Utilization in Lesotho, these data provide much of the necessary input for testing the hypotheses and meeting the objectives.

Table A.1 Villages Surveyed by Geo-climatic Zone, District and Enumeration Area

District	Enumeration Area	Villages	Geo-climatic zone
Maseru	2708	Ha'Maliketso, Ha Boyce	Lowlands (Southern)
	2315	Tsutsulupa, Tiping, Ha Elia, Meeling, Polateng Ha Chela	Mountains (remote)
	2406	Sebaki, Nkesi, Phallang	Moutains (less remote)
Mafeteng	3902	Mokhoeea, Matebe, Ha Seeiso	Lowlands (Southern)
	3401	Ha Rajohane, Ha Azael, Ha Rakoena, Ha Ramoreki	Lowlands (Southern)
Mohale's Hoek	4202	Ntjanyana, Moreneng	Foothills
	4207	Ha Tsiu, Methalaneng, Ha Baleni, Ha Tsirela	Foothills
	4308	Ha Makausu, Sea luma, Motse-mocha	Mountains (remote)
Quthing	4817	Mosi, Posholi	Orange River Valley
Qacha's Nek	5406	Ha Mofolo, Maphotong, Sebaya	Orange River Valley
	5616	Ha Ratsiu, Phuthing	Orange River Valley

Table A.1 (Continued)

District	Enumeration Area	Villages	Geo-climatic zone
Mokhotlong	5901	Kheseng) Litsoeneng) Lephakoeng)	Mountains (less remote)
Thaba-Tseka	0606	Mapeleng) Ha Theko)	Mountains (remote)
	0616	Ha Sepiriti) China)	Mountains (less remote)
Leribe	0712	Qhophello) Nkoeng) Phalole)	Foothills
Berea	1315	Boinyatso) Ha Rajone)	Lowlands (northern)
	1906	Keahana) Ha Pampiri) Ha Ramaqopetsa) Ha Senekal)	Lowlands (northern)
	1909	Ha Rankatlo) Rakheleli) Lekhalong)	Lowlands (northern)

Figure A.2 Enumeration Areas Surveyed

(Adapted from: Royal Commonwealth Society,
Notes on Conditions, June 1980)

PART B

SUMMARY TABULATION OF SURVEY RESULTS

1. HOUSEHOLD DEMOGRAPHIC CHARACTERISTICS

The first section of the summary reports information collected on a variety of demographic characteristics of household members, with emphasis placed on the household head and the spouse of the head. Sex, age, residental status, education, occupation, and the location of employment are all considered because of their potential for affecting household production and decision making. For instance, the sex of the household head is important because in Basotho culture men are traditionally considered household heads, and livestock rearing is traditionally dominated by males. The age of the head affects the type and location of employment as well as the accumulation of livestock in the household. The residential status of the members affects the availability of labour and management, while the education of household members affects the functioning of the household regarding family size, employment, and occupation.

There were problems encountered in soliciting some of this information. The age and education of some household members was frequently not known by the respondant. Table 1.1 shows that 21.9 percent of the respondants did not know the age of the household head, and 15.9 percent did not know the age of the spouse. The most common age category for household heads was between 41 and 60 years (44.2 percent), while the most common age category for the spouses was between 20 and 40 years (34.4 percent). 85.8 percent of the respondants indicated that the head of the household was male, while only 14.2 percent reported females as heads. The reverse is the case for the sex of the heads' spouse, 81.4 percent were female, 0.6 percent were male, and 18 percent reported no spouse (table 1.2). Most of the household heads (85.4 percent) were married, and only 0.7 percent were single. 11.6 percent were widowed and 2.2 percent were either seperated or divorced (table 1.3).

In table 1.4 the residential status of the heads and spouses are reported. Household heads were found to be resident in 81.3 percent of the households, absent from Lesotho for reasons related to employment in 17.6 percent of households, and absent for other reasons (1.4 percent). The majority of household heads (50.9 percent) have had only primary education, standard 1 to 6. The next highest percentage of heads have had no schooling (38.9 percent), and 4.8 percent of the respondants indicated that they did not know the education of the head. Only 0.2 percent (one household) was reported to have achieved higher education -- C.O.S.C., teacher's certificate, Lesotho Agricultural College diploma, or a university degree.

Table 1.6 reports the occupation of the household heads. Farming was reported to be the occupation of 38.7 percent of the heads, and 24.4 percent were reported to be miners in South Africa. 9.3 percent of the heads were reported to be unemployed. Household head employment location is shown in table 1.7. The local area was the place of employment for 60.6 percent of the heads, while 26.7 percent reported employment in

South Africa. The difference between the number reported to have South African employment (26.7 percent) and South African residency (17.5 percent) is partially due to the system of oscillating migration which results in many career migrant workers being temporary residents in Lesotho between contracts in South Africa.

Data summarized on table 1.8 support the common belief that Basotho women generally receive higher levels of education than men. Only 11 percent of the spouses had no education, compared to 39.0 percent of the household heads. Similar to the heads, however, very few of the spouses had achieved greater than Standard 7 education.

In table 1.9, the employment location for the spouse of the head is reported. 76.8 percent of the spouses had employment in the local area; with 18.1 percent reporting no spouse, this indicates that 93.9 percent of the spouses worked locally. Information contained in table 1.10 indicates that most of this local employment was within the household.

While tables 1.1 to 1.10 report information pertaining to the head of the household and the head's spouse, tables 1.11 to 1.14 relate information about other members of the household regarding age, sex, relationship to the household head, education and employment. Table 1.11 shows that the household composition ranges from one member families to families with more than ten members. It can be observed from this table that 86.9 percent of the households reported at least one child in the household, the average number of children was 3.19 and the modem number of children was four. 14.7 percent of the households reported to be living with one or more parent, and 31.3 percent reported some grandchildren to be living with them. Another 10.1 percent of the households had hired workers resident in the households who could be herders or domestic workers. The average number of household members, other than the household head and spouse, was 4.77.

Table 1.12 shows reported age and sex of other household members. 43.4 percent of the households reported other adult males, and 42.1 percent other adult females. There were an average total of 2.7 other males and 2.1 other females in the households. 17.7 percent reported infant males and 17.4 percent reported infant females in the households.

In table 1.13 the educational status of the household members is reported. This information once again supports the hypothesis that females have greater access to education than males. Very few of the households reported females with no schooling (2.6 percent), while 25 percent of the households reported males with no schooling. Females also achieve greater education levels. Only 8.2 percent of the households reported males educated to standard 7 level, while 13.1 percent of the households contained females educated to that level.

Employment of other household members is reported in table 1.14. 13.2 percent of the households reported one male member of the household working in the mines and 5.2 percent reported two males in the mines. 27.6 percent reported a male working locally, probably as a farmer or other labourer, while 12.1 percent reported having one female working locally. Again, many more females than males were currently enrolled in school.

Table 1.1

Age of Household Head and Spouse of HH Head (n = 537)

Age Category	Age of Household Head: No. of HH reporting	Age of Household Head: % of HH reporting	Age of Spouse of HH Head: No. of HH reporting	Age of Spouse of HH Head: % of HH reporting
Age unknown	117	21.9	85	15.9
20-40 years	102	19.1	184	34.4
41-60 years	236	44.2	151	28.2
61-80 years	76	14.2	20	3.7
81-100 years	3	0.6	-	-
no spouse	-	-	95	17.8
Total responses	534	100.0	535	100.0
Missing cases	3		2	

Table 1.2: Sex of HH Head and Spouse of HH Head (n = 537)

Sex	Sex of Household Head: No. of HH reporting	Sex of Household Head: % of HH reporting	Sex of Spouse of HH Head: No. of HH reporting	Sex of Spouse of HH Head: % of HH reporting
Male	459	85.8	3	0.6
Female	76	14.2	437	81.4
No spouse	-	-	95	18.1
Total responses	535	100.0	535	100.1
Missing cases	2		2	

Table 1.3: Marital Status of Household Head (n=537)

Marital Status	No. of HH reporting	% of HH reporting
Single	4	0.7
Married	457	85.4
Widowed	62	11.6
Seperated/Divorced	12	2.2
Total responses	535	99.9
Missing cases	2	

Table 1.4

Residential Status of HH Head and Spouse of HH Head (n = 537)

	Household Head		Spouse of HH Head	
Location	No. of HH reporting	% of HH reporting	No. of HH reporting	% of HH reporting
Resident	434	81.3	433	81.2
Absent outside Lesotho - work	94	17.6	5	0.9
Absent outside Lesotho - other	3	0.6	-	-
Absent in Lesotho - school	3	0.6	-	-
Absent in Lesotho - other	1	0.2	1	0.2
No spouse	-	-	95	17.8
Total responses	535	99.9	534	100.1
Missing cases	2		3	

Table 1.5: Household Head Education (n=537)

Highest Education	No. of households	% of households
Standard 1-6	273	50.9
Standard 7	20	3.7
Form C	7	1.3
Higher Education	1	0.2
Unknown	26	4.9
No schooling	209	39.0
Total responses	536	100.0
Missing cases	1	

Table 1.6: Household Head Occupation (n=537)

Occupation	No. of households	% of households
Farmer	207	38.7
Housewife	43	8.0
Domestic Worker	2	0.4
Local Business Owner	10	1.9
Business employee	19	3.6
Miner	131	24.4
Migrant - other	10	1.9
Government Employee	12	2.2
Herdboy	6	1.1
Other - Knitting, building, chief	38	7.1
Unemployed	50	9.3
Unemployed looking for work in RSA	3	0.6
Unemployed looking for work in Lesotho	4	0.7
Total responses	535	99.9
Missing cases	2	

Table 1.7: Household Head Employment Location (n=537)

Location	No. of households	% of households
Maseru	2	0.4
Home District	3	0.6
Local Area	324	60.6
Other - Lesotho	1	0.2
RSA	143	26.7
Not Applicable	62	11.6
Total responses	535	100.1
Missing cases	2	

Table 1.8: Spouse Education (n = 537)

Highest Education	No. of households	% of households
Standard 1-6	298	55.5
Standard 7	49	9.1
Form C	4	0.7
Higher Education	--	--
Unknown	32	6.0
No schooling	59	11.0
No spouse	95	17.7
Total responses		100.0
Missing cases	0	

Table 1.9: Spouse of Household Employment Location (n = 537)

Location	No. of households	% of households
Home District	2	0.3
Local Area	404	76.8
RSA	4	0.8
Not employed	21	3.9
No spouse	106	18.1
Total responses	537	99.9
Missing cases	0	

Table 1.10: Occupation of Spouse of Household Head (n = 537)

Occupation	No. of households	No. of households
Farmer	26	4.9
Housewife	364	68.0
Domestic	1	0.2
Local Business Owner	3	0.6
Business Employee	6	1.1
Miner	2	0.4
Migrant - other	2	0.4
Government Employee	3	0.6
Unemployed	21	3.9
Unemployed looking for work in Lesotho	4	0.7
Unemployed looking for work in RSA	1	0.2
Other jobs	7	1.3
No spouse	95	17.8
Total responses	535	100.1
Missing cases	2	

Table 1.11: Household Composition (other than head and spouse)

% of households reporting

	0	1	2	3	4	5	6	7-8	9-10	>10	Mean	Standard Deviation	Number Missing
Children	13.0	13.8	11.9	15.6	17.9	14.7	6.7	5.3	0.4	0.6	3.19	2.49	1
Parents	85.3	12.1	2.2	0.4	-	-	-	-	-	-	0.18	0.46	0
Siblings	91.1	5.6	1.7	0.4	0.9	0.2	0.2	-	-	-	0.16	0.63	0
Sons/daughters-in-law	81.9	15.6	1.5	0.6	0.4	-	-	-	-	-	0.22	0.53	0
Grandchildren	68.7	12.1	9.5	4.3	2.6	1.3	0.9	0.4	0.2	-	0.71	1.36	0
Other relatives	82.1	10.8	4.1	2.2	0.2	0.4	-	-	0.2	-	0.30	0.83	0
Hired workers	86.8	10.1	2.0	0.4	0.2	0.2	0.2	0.2	-	-	-	-	0
Other people	99.1	0.9	-	-	-	-	-	-	-	-	0.01	0.096	0
Total											4.77		

Table 1.12: Age and Sex of Household Members (other than head and spouse)

% of household reporting

	0	1	2	3	4	5	6	7-10	Mean	Standard Deviation	Number Missing
Males - adult	56.6	28.1	10.3	3.7	0.4	0.4	0.2	0.2	.66	.98	0
- 15-20 yrs	61.5	27.2	8.9	2.2	0.2				.53	.76	0
- 6-14 yrs	46.1	30.0	17.2	5.0	1.7				.86	.98	1
- 3-5 yrs	76.9	20.5	2.6						.26	.49	0
- <3 yrs	82.3	16.2	1.5						.19	.43	0
- age unknown	37.7	7.1	3.0	1.1	0.4	0.6	0.6		.22	.71	0
- total									2.72		
Females - adult	57.9	31.1	8.2	1.5	1.1	0.2			.57	.82	0
- 15-20 yrs	73.6	21.4	4.3	0.6	0.2				.32	.60	0
- 6-14 yrs	48.6	32.8	14.0	3.5	1.1				.76	.90	0
- 3-5 yrs	77.3	20.5	2.2						.25	.48	
- <3 yrs	82.5	16.5	0.9						.16	.64	0
- age unknown	90.5	6.3	1.7	0.6		0.7	0.2		2.06		
Total male & female (exc. head & spouse)									4.78		
Total male & female (inc. head & spouse)									6.60		

Table 1.13: Education of Household Members (other than head and spouse)

% of households reporting

	0	1	2	3	4	>4	Mean	S.D.	Missing
Males									
- Std 1 to 6	68.3	19.7	9.7	1.9	0.4	-	.46	.77	0
- Std 7	91.8	7.6	0.6	-	-	-	.09	.30	
- Form C	96.6	3.2	0.2	-	-	-	.04	.20	0
- Form E	99.1	0.9	-	-	-	-	.01	.10	0
- other	99.3	0.7	-	-	-	-	.01	.09	0
- no schooling	75.0	18.4	4.8	1.3	0.2	0.2	.34	.69	0
Females									
- Std 1 to 6	77.6	17.5	3.7	0.9	0.2	-	.29	.60	1
- Std 7	87.0	11.4	1.3	0.4	-	-	.15	.42	0
- Form C	96.3	3.5	0.2	-	-	-	.04	.20	0
- Form E	99.6	0.2	0.2	-	-	-	.01	.10	0
- other	99.1	0.6	0.2	0.2	-	-	.02	.17	1
- no schooling	97.4	2.4	0.2	-	-	-	.03	.18	0

Table 1.14: Employment of Household Members (other than head and spouse)

	% of households reporting							
	0	1	2	3	4-5	Mean	S.D.	Missing
Males								
- mines	81.2	13.2	5.2	0.4	-	.25	.56	0
- other SA	99.4	0.6	-	-	-	.01	.08	0
- in school 6-14 yrs	63.9	25.9	8.2	1.5	0.6	.49	.76	0
- in school 15-20 yrs	84.5	13.4	1.9	0.2	-	.18	.44	0
- work in Maseru	98.7	1.3	-	-	-	.01	.11	0
- work in district	99.6	0.4	-	-	-	.004	.06	
- work locally	58.4	27.8	8.8	3.5	1.1	.63	.94	1
- other Lesotho	96.1	3.7	0.2	-	-	.04	.21	0
Females								
- mines	99.6	0.2	0.2	-	-	.01	.10	0
- other SA	98.9	0.9	0.2	-	-	.01	.13	0
- in school 6-14 yrs	57.2	27.4	11.7	3.2	0.6	.63	.85	0
- in school 15-20 yrs	79.3	17.7	2.6	0.4	-	.24	.51	0
- work in Maseru	99.4	0.4	-	-	0.2	.01	.18	0
- work in district	99.6	0.2	-	-	-	.002	.04	1
- work locally	84.5	12.1	2.2	0.9	0.2	.20	.53	0
- other Lesotho	97.4	2.4	0.2	-	-	.03	.18	0
- in school >20								

2. HOUSEHOLD INCOME

There were three main reasons for soliciting information about sources of household income. First, it is important to understand the relative contribution of livestock to the household income of livestock-owning households. Second, it will be illuminating to compare the household income characteristics of the livestock-owning households interviewed in this survey with household populations interviewed in other surveys. Third, the employment history of livestock-owning households could be an important factor in explaining accumulations of livestock wealth. It has been hypothesized that there is a relationship between livestock holdings and the household life cycle.

Households were asked to provide the following information: (1) a listing and ranking of the main sources of household cash income; (2) an indication of monthly wages received; (3) a listing of the five previous jobs held by the household head and the number of years spent in each job.

Table 2.1 shows sources of cash income. Remittances from mine employment was ranked by 36.9 percent of the households as the principal source, 11.4 percent ranked sale of livestock as the principal source, 10.8 percent ranked sale of livestock products as principal, sale of crops or fodder was ranked as principal by 7.8 percent, while building and thatching was ranked as principal by 6.7 percent of the households. A variety of other activities were ranked as principal sources by 24 percent of the households, and 2.4 percent did not indicate a principal source of cash income. Sale of joala (a traditional sorghum beer) dominated as a secondary source of cash income. A total of 42.1 percent of the households listed mine remittances as a source of cash income. 38.7 percent of the households indicated cash income from the sale of joala. Both livestock sales (25.8 percent) and livestock product sales (23.0 percent) were listed as a source of cash income by more households than was crop or fodder sales (18.9 percent). Building and thatching, sale of fruit and vegetables, sale of handicrafts, sale of chickens, eggs and pork, and contributions from relatives are other significant sources of cash income.

Table 2.2 reports monthly wages received by the household head. Over half (59.7 percent) of the respondants did not report any regular monthly earnings, though information extracted from table 2.1 indicates that most households generate cash income from irregular sales of products generated by the household. Average monthly income for wage earners was M181.29, whilst the average monthly income for all households is M75.61. The modem monthly income is the M200 to M299 wage category. It is important to not that income earned by miners may not have been fully counted in this table because incomes reported would often be remittances rather than total earnings.

An attempt was made to quantify the income received by the households from the alternative sources, excluding income derived from livestock. In table 2.3 it is reported that 38.8 percent of the households received some income from the brewing and sale of joala, compared to 37.1 percent who received income from the work of men in South Africa, 19.2 percent from the sale of field crops, 10.8 percent from the sale of swine or poultry products, 9.9 percent from the work of men in Lesotho, and 9.8 percent from

the sale of vegetables. For those households which reported the sources, all of the highest monthly incomes were generated from non-agricultural activities: shops and taxis (M272.38 per month), work of men in South Africa (M177.69 per month), work of men in Lesotho (M144.06 per month), work of women in Lesotho (M69.00 per month), building and thatching (M62.78 per month), and the sale of handicrafts (M60.82 per month). For all households, the work of men in South Africa contributed 47.5 percent of the income, followed by the work of men in Lesotho (9.7 percent), profits from shops and taxis (7.7 percent), and the sale of joala (7.5 percent). The average monthly income, apart from income generated by livestock, was M138.49 per month for all reporting households.

Tables 2.4 and 2.5 were supposed to give the employment history of the household head including the number of years spent in each job. However, the way the information was collected eliminates most of the potential value. The question asked respondants to provide information about the five previous jobs held by the household head prior to the present one, but the way it was interpreted, the respondants started with the first job they held and ended with their present job. Table 2.3 does indicate that over 65 percent of the household heads had been miners at some point in their career and that very few household heads reported farming as their first job.

Table 2.1: Sources of Cash Income

% of households reported

	Principal Source	Second Source	Third Source	Fourth Source	% reporting source
;tock	11.4	8.6	5.4	0.4	25.8
;tock Products	10.8	9.7	1.9	0.6	23.0
tance from mines	36.9	3.5	1.3	0.4	42.1
or fodder sales	7.8	6.3	4.1	0.7	18.9
(sale)	4.5	21.0	10.2	3.0	38.7
s & vegetables	1.3	3.2	2.4	0.4	7.3
cafe	2.4	1.7	0.6	0.4	5.1
crafts	1.7	3.0	1.7	0.4	6.8
ing/Thatching	6.7	3.7	1.5	0.4	12.3
jobs	0.7	0.9	0.9	0.2	2.7
ens, eggs, pork	0.4	2.2	3.4	0.9	6.9
equip stock rental	0.6	1.3	1.9	0.2	4.0
remitt. from RSA	1.3	0.4	-	-	1.7
nment Employment	1.5	0.9	0.2	0.2	2.8
Construction	0.6	0.6	0.4	-	1.6
in RSA (not mines)	1.1	0.4	-	-	1.5
list	0.4	0.6	0.2	0.2	1.4
e	0.2	-	-	-	0.2
ives	2.2	2.8	1.5	0.2	6.7
rmill	0.2	0.2	0.2	-	0.6
of Soft Goods	0.2	1.1	-	-	1.3
e from hired shepherd	-	0.2	-	-	0.2
on money	0.7	0.2	-	-	0.9
of wood	0.4	0.7	-	-	1.1
it of lobola (money from)	-	0.2	-	-	0.2
for work	1.1	0.9	0.6	0.7	3.3
of traditional tobacco	-	0.4	0.2	-	0.6
orking in Lesotho	1.7	0.4	0.2	-	1.3
:ainship	-	0.2	0.4	-	0.6
Butchery Employee	0.2	0.2	-	-	0.4
working in Lesotho	0.7	0.2	-	-	0.9
irce	2.4	24.6	60.9	90.9	
	100.1	100.3	100.1	100.2	
ig cases	-	-	-	-	

Table 2.2: Household Head Wages/month

Maloti	No. of households	% of households
0	253	59.7
1-9	10	2.4
10-19	16	3.8
20-49	28	6.6
50-99	19	4.5
100-199	21	5.0
200-299	41	9.7
300-399	16	3.8
400-499	5	1.2
500-599	8	1.9
600-699	3	0.7
800	1	0.2
900	-	-
1000	1	0.2
1060	1	0.2
1740	1	0.2
Total respondants	424	99.5
Missing	113	
Mean of those with wage employment	M181.29	
Mean of all households	75.61	

Table 2.3: Reported Household Income

Source	Number of households reporting source	% of households reporting source	Ave. monthly income for households reporting	Ave. monthly income for all households	Missing Cases
Work of men - RSA	199	37.1	M177.69	M65.84	35
Work of women - RSA	14	2.7	57.86	1.51	6
Work of men - within Lesotho	50	9.9	144.06	13.41	7
Work of women - within Lesotho	26	5.1	69.00	3.34	1
Sale of chickens, eggs, pigs & pork	57	10.8	25.18	2.67	3
Sale of joala or beer	206	38.8	26.92	10.33	15
Sale of vegetables	50	9.8	22.14	2.06	5
Rental of farm equipment	27	5.3	31.93	1.61	1
Profit from shop/cafe/taxi	21	4.2	272.38	10.65	2
Sales of HH produced handicrafts	34	6.4	60.82	3.86	3
Sale of other things	19	3.8	55.00	1.95	-
Gifts or help	27	5.3	65.41	3.29	-
Payment of building, thatching	46	8.4	62.78	5.38	2
Rental of house	2	0.4	55.00	0.20	-
Sale of field crops	99	19.2	40.40	7.46	6
Other cash sources	56	10.9	47.32	4.93	3
Total cash income (except from livestock)				138.49	

Table 2.4: HH Head Previous Employment - type of employment

Type of Employment	% of households reporting					
	1st Job	2nd Job	3rd Job	4th Job	5th Job	Career
Miner	65.3	8.8	2.8	0.2	0.2	77.3
Farmer	2.6	14.8	4.5	1.1	0.6	23.6
Shearing	0.9	0.7	-	0.2	-	1.8
Building	2.2	6.7	0.7	0.2	-	9.8
Herder	6.5	1.3	-	-	-	7.8
Teacher	0.2	0.4	-	-	-	0.6
Government Employee	2.4	3.4	1.3	-	-	7.1
Never worked	3.4	0.4	0.7	0.6	0.6	5.7
Cafe Taxi	0.9	2.2	0.6	-	-	3.7
Driver	0.6	0.4	-	-	-	1.0
RSA - other	4.3	3.2	1.3	0.4	0.2	9.4
Leather/Grass work	1.5	0.2	-	-	-	1.7
Sold Stock	0.2	0.4	-	-	-	0.6
Chieftainship	-	0.6	-	0.4	-	1.0
Joala	0.6	0.2	-	-	-	0.8
Herbalist	0.4	0.2	-	0.2	-	0.8
Housekeeper	1.9	0.6	-	-	-	2.5
Food for work	0.6	0.6	-	-	-	1.2
Not working	-	0.2	-	-	-	0.2
Business employee	0.7	0.4	0.4	-	-	1.5
Butcher	0.2	-	-	-	-	0.2
Sold Soft Goods	-	-	0.2	-	-	0.2
Tailor	0.2	0.6	0.2	0.2	-	1.2
Transport using stock	-	0.4	-	-	-	0.4
Mill operator	0.2	-	-	-	-	0.2
Firms in Lesotho	-	0.4	-	-	-	0.4
No previous job	4.3	53.3	87.3	96.6	98.5	
Total	100.1	100.4	100.0	100.1	100.1	
Missing cases	1	2	3	1	1	

Table 2.5: HH Head Previous Employment - years in previous job

% of households reporting

Years	1st Job	2nd Job	3rd Job	4th Job	5th Job
1	7.9	4.7	2.6	-	-
2	3.8	1.8	0.7	0.2	0.2
3	4.1	3.7	0.2	0.4	-
4	4.7	3.3	0.6	0.2	-
5	2.6	3.3	0.7	0.4	-
6	2.3	2.4	-	-	-
7	2.0	1.0	-	-	-
8	2.0	1.8	0.7	0.4	-
9	0.9	1.2	0.2	0.2	-
10	3.5	2.0	0.6	-	-
11	3.2	0.4	-	-	0.2
12	3.8	0.6	0.6	-	-
13	2.6	1.2	-	0.2	-
14	2.0	1.6	0.4	-	-
15	3.2	1.0	0.4	-	-
16	2.9	0.4	0.2	-	-
17	1.5	0.6	0.2	-	-
18	1.2	0.8	0.6	-	-
19	2.6	0.2	0.2	0.2	-
20	2.0	1.4	0.2	-	-
21-30	17.8	5.0	1.6	0.2	-
31-40	8.6	2.0	0.8	0.2	-
41-50	2.1	.4	-	-	-
52	-	-	-	-	0.2
70	0.3	-	-	-	-
Mean	15.8	11.3	10.3	10.8	21.7
No job	12.5	58.9	87.6	97.6	99.4
Missing cases	1	2	3	1	1
Don't know	193	44	-	1	2

3. OWNERSHIP OF AGRICULTURAL ASSETS AND BUILDINGS

A series of questions were asked regarding the households' ownership and use of agricultural assets -- machinery, buildings and fields -- necessary to agricultural production. The major inputs to agricultural production are land, labour, capital assets (primarily agricultural implements), draught power (supplied by both animals and tractors), water (for both dryland and irrigated crop production), seed, fertilizer and chemicals. The availability of labour for agricultural, livestock, and other activities is reviewed in section 2, while draught resources are reviewed in section 11. In this section the focus is on the farmers' access to agricultural implements such as plows, cultivators, seeders and tractors, household buildings, and land. Regarding agricultural assets, the main questions are: Do households have the right implements? Do they have access to these implements at the appropriate times? What are the ownership patterns existing in the community? The ownership patterns affect the livestock sector through the demand for animal draught power, and shed some light on the attitudes of people towards cooperative ownership of assets.

In table 3.1 the number of animal and tractor-drawn farm implements owned by the surveyed households are reported. 62.4 percent of the households reported ownership of one animal-drawn plough, and 5.0 percent, two animal-drawn ploughs. Animal-drawn cultivators are owned by 32.2 percent of the households, while 26.1 percent of the households own animal-drawn planters. 13.4 percent of the households own animal-drawn carts, and 19.2 percent own animal-drawn harrows.

The bottom half of table 3.1 reports household ownership of tractors and tractor-drawn equipment. Only 3.4 percent of the households own a total of 27 tractors. Nine ploughs are owned by 1.7 percent of the households, and a total of 3 cultivators are owned.

In table 3.2 the form of ownership of agricultural implements is reported. The vast majority of the animal-drawn agricultural implements are wholly owned by the households, of 68.2 percent of the households owning ploughs only 4.3 percent share ownership. Of 23 shared ownerships of ploughs, 20 are with relatives. All tractors and tractor-drawn implements are wholly-owned.

Information on the numbers of different types of household buildings is reported in tables 3.3 and 3.4. The information was collected as some measure of household wealth, and to determine the demand for dung for smearing on mud/dung floors. Table 3.3 shows the number of household buildings owned, with the buildings classified as rondavels, rectangular, and stanlaka. The type of building materials used in the construction of these houses is indicated in table 3.4.

Rondavels were found to be the most common type of house. A total of 89.2 percent of the households owned one or more rondavel, with most households owning two or more, and a few owning as many as six. Rectangular houses were the second most common housing type. Over half of the households (54.6 percent) owned one or more rectangular house. Only

4.3 percent of the households owned a stanlaka. The total sample of 537 households owned a total of 1401 houses, for an average of 2.6 houses per household.

The type of construction of the houses is reported in table 3.4. For all housing types the most common type of wall was stone, followed by earth. The floors of almost all of the houses were mud/dung, suggesting large dung demands for smearing on both floors and walls.

The land ownership-cropping patterns of the surveyed households are reported in tables 3.5 to 3.8. Of the 537 households surveyed, 43 had access to four fields, 109 had access to three fields, 184 had access to two fields, and 126 had access to one field. Seventy-five households had no access to fields. Twelve different crops were reported to have been grown on those fields in the previous summer growing season. In order of importance those crops were maize, sorghum, wheat, peas, beans, barley, fodder, vegetables, lentils, sunflowers, pumpkins and lentils. The two winter crops, wheat and peas, were grown by a small percentage of the households.

Sharecropping was found to be a relatively common practice amongst the surveyed households. Eleven percent of all households participated in some sharecropping arrangement on their own fields, while 23.1 percent sharecropped on others' fields. The data indicate that livestock managing households are more often the parties providing draught and labour resources to those households which hold land but lack the resources to adequately farm it. Of a total of 279 fields which were sharecropped, only 26.9 percent of the fields were owned by the surveyed livestock-managing households, while 73.1 percent of the fields were owned by others (table 3.9).

Table 3.1: Numbers

	0	1
Animal Drawn		
Plough - % of HH	32.2	62.4
- no. of ploughs	0	335
Cultivator - % of HH	67.8	30.7
- no. of cultivators	0	165
Planter - % of HH	73.9	25.0
- no. of planters	0	134
Carts - % of HH	86.4	13.0
- no. of carts	0	70
Harrows - % of HH	80.4	18.6
- no. of harrows	0	100
Tractor Drawn		
Tractor - % of HH	96.6	2.8
- no. of tractors	0	15
Plough - % of HH	98.3	1.7
- no. of ploughs	0	9
Cultivator - % of HH	99.4	0.6
- no. of cultivators	0	3
Harrow - % of HH	99.6	0.4
- no. of harrows	0	2
Trailer - % of HH	99.4	0.6
- no. of trailers	0	3

of Farm Implements Owned (n = 537)

2	3	4	Total
5.0	0.2	0.2	
54	3	4	396
1.3	0.2	-	
14	3	-	182
1.1	-	-	
12	-	-	146
0.4	-	0.2	
4	-	4	78
0.4	-	0.6	
4	-	12	116
-	-	0.6	
-	-	12	27
-	-	-	
-	-	-	9
-	-	-	
-	-	-	3
-	-	-	
-	-	-	2
-	-	-	
-	-	-	3

Table 3.2: Form of Ownership of Farm Implements (n = 537)

	Wholly Owned	Shared with Relative	Shared with Non-relative	Missing Cases	Not Applicable
nal Drawn					
ugh - % of HH	63.9	3.7	0.6		31.6
- no. of ploughs	342	20	3	31	
tivator - % of HH	31.0	0.9	0.2		67.9
- no. of cultivators	166	5	1	10	
nter - % of HH	24.9	0.9	0.4		73.8
. no. of planters	133	5	2	6	
:s - % of HH	12.1	0.6	0.4		86.9
. no. of carts	65	3	2	8	
'ows - % of HH	18.4	0.4	0.2		81.1
. no. of harrows	98	2	1	15	
:tor Drawn					
:tor - % of HH	2.8	-	-		97.2
no. of tractors	15	-	-	8	
.gh - % of HH	1.5	-	-		98.5
no. of ploughs	8	-	-	2	
:ivator - % of HH	0.6	-	-		99.4
no. of cultivators	3	-	-	1	
'ow - % of HH	0.4	-	-		99.6
no. of harrows	2	-	-	1	
.ler - % of HH	0.6	-	-		99.3
no. of trailers	3	-	-	-	

Table 3.3: Numbers of Home Buildings Owned

Percentage of households reporting buildings by number and category

	0	1	2	3	4	5	6	Total
Rondavels - % of HH	10.8	32.6	35.0	15.6	4.8	0.7	0.4	99.9
- No. of buildings	-	175	376	252	104	20	12	936
Rectangular - % of HH	45.4	35.6	13.0	4.8	0.6	0.4	0.2	100.0
- No. of buildings	-	191	140	78	12	10	7	438
Stantaka - % of HH	95.5	4.3	-	-	0.2	-	-	
- No. of buildings	23	-	-	-	4	-	-	27

Table 3.4: Type of Construction of Home Buildings (n = 537)

% of households

	0	1	2	3	4	5	6	Total
Rondavels								
Walls								
Stone	46.0	22.6	19.6	8.4	2.8	0.4	0.2	100.0
Earth	60.9	16.0	15.8	5.6	1.1	0.4	0.2	100.0
Brick	99.6	0.4	-	-	-	-	-	100.0
Floor								
Concrete	99.3	0.7	-	-	-	-	-	100.0
Dung/mud	14.7	32.0	32.2	15.3	4.7	0.7	0.4	100.0
Carpet	95.8	3.5	0.7	-	-	-	-	100.0
Rectangle								
Walls								
Stone	66.1	24.4	7.8	1.3	0.2	0.2	-	100.0
Earth	81.6	14.0	3.9	0.4	0.2	-	-	100.0
Brick	90.1	8.4	1.3	-	-	0.2	-	100.0
Other	98.7	1.1	0.2	-	-	-	-	100.0
Floors								
Concrete	92.6	6.5	0.6	0.2	0.2	-	-	100.0
Dung/mud	57.5	33.5	7.6	0.7	0.4	0.2	-	100.0
Carpet	82.1	16.0	1.5	0.4	-	-	-	100.0
Stantaka								
Walls								
Stone	97.0	2.8	-	-	0.2	-	-	100.0
Earth	99.6	0.4	-	-	-	-	-	100.0
Bricks	98.9	1.1	-	-	-	-	-	100.0
Floors								
Concrete	98.5	1.5	-	-	-	-	-	100.0
Dung/mud	97.2	2.6	0.2	-	-	-	-	100.0
Carpet	99.1	0.9	-	-	-	-	-	100.0

Table 3.5: Planting of Summer & Winter Crops - Field 1

Number of Households Reporting (n = 536)

Crop Planted	Plot 1		Plot 2		Plot 3	
	Summer	Winter	Summer	Winter	Summer	Winter
Maize	273	-	29	-	6	-
Barley	7	-	6	-	1	3
Wheat	32	35	7	-	1	2
Sorghum	135	-	32	-	1	-
Peas	12	22	8	2	-	-
Beans	-	-	6	4	4	4
Fodder	2	-	-	-	-	-
Sunflower	1	-	-	-	-	-
Total	462	57	88	6	13	9

Table 3.6: Planting of Summer & Winter Crops - Field 2

Number of Households Reporting (n = 536)

Crop Planted	Plot 1		Plot 2		Plot 3	
	Summer	Winter	Summer	Winter	Summer	Winter
Maize	171	-	13	-	4	-
Barley	11	-	2	-	2	-
Wheat	37	-	3	-	1	-
Sorghum	95	-	9	-	-	-
Peas	8	-	5	-	1	-
Beans	9	-	7	-	3	-
Fodder	2	-	1	-	-	-
Lentils	1	-	1	-	-	-
Sunflower	1	-	1	-	-	-
Vegetables	1	-	1	-	-	-
Total	336	-	42	-	11	-

Table 3.7: Planting of Summer & Winter Crops - Field 3

Number of Households Reporting (n = 536)

Crop Planted	Plot 1		Plot 2		Plot 3	
	Summer	Winter	Summer	Winter	Summer	Winter
Maize	78	-	6	-	-	-
Barley	9	-	4	-	-	-
Wheat	20	-	-	-	-	-
Sorghum	46	-	5	-	1	-
Peas	13	-	3	-	2	-
Beans	13	-	2	-	-	-
Fodder	1	-	1	-	-	-
Vegetables	1	-	1	-	-	-
Pumpkin	1	-	1	-	-	-
Total	152	-	23	-	3	-

Table 3.8: Planting of Summer & Winter Crops - Field 4

Number of Households Reporting (n = 536F)

Crop Planted	Plot 1		Plot 2		Plot 3	
	Summer	Winter	Summer	Winter	Summer	Winter
Maize	22	-	-	-	-	-
Barley	2	-	-	-	-	-
Wheat	4	-	-	-	-	-
Sorghum	14	-	-	-	-	-
Peas	1	-	-	-	-	-
Total	43	-	-	-	-	-

Table 3.9: Number of Fields Involved in Sharecropping Arrangements (n = 536)

Number of fields	Number of households reporting: Sharecropping of own land	Sharecropping of others land
0	460	393
1	48	72
2	8	33
3	1	12
4	2	6
5	-	-
6	-	1
Total HH with sharecropped fields	59	124
Total fields	75	204

4. LIVESTOCK OWNERSHIP AND MANAGEMENT

With the first three sections of this summary establishing base information on household characteristics, the focus is now shifted to specific characteristiccs about the livestock enterprises managed by the households. This section reports information onlivestock inventories, where the term livestock refers to cattle, sheep, goats, horses and donkeys. Emphasis is placed on the number of animals managed, rather than the number owned by the households. With the large number of animals involved in long-term mafisa and other borrowing / lending and caretaker arrangements, it appears that the legal ownership of many animals is questionable (Shoup, personal communication 1/04/87). In this survey, confusion over the difference between ownership and management on the part of both the respondants and the enumerators appears to have contributed to the collection of some inconsistent data on ownership. For the sake of avoiding unnecessary confusion, the ownership data that were collected are not reported. Rather, what are reported are the numbers of livestock managed, the numbers reported mafisa'd in, and the numbers reported mafisa'd out. Approximations of the numbers of animals owned can be derived by taking the number managed, less the number mafisa'd in, plus the number mafisa'd out.

In tables 4.1 to 4.5 the inventories of cattle, sheep, goats, horses and donkeys are reported by sex. The numbers of households which reported different categories of numbers of animals are indicated, as are the number of animals involved in each category. Mean numbers of animals are indicated for those households which reported each species, and for all households interviewed. Of the total of 537 households which reported holdings of some livestock, 462 reported some cattle, 250 some sheep, 235 some goats, 273 some horses, and 250 some donkeys. Numbers of animals reported to involved in mafisa relationships are also reported for each species. For the lack of more appropriate English terms, the term 'mafisa'd in' is used to refer to animals which the households are managing which are on mafisa loan from another household, while 'mafisa'd out' refers to animals which the household owns but are on mafisa loan to another household. For a more complete discussion of mafisa see section 18 of this report.

Table 4.1 reports cattle inventories. For the 462 cattle-holding households, the average herd size was 7.5 cattle, comprised of 0.8 bulls, 2.3 oxen, 4.3 cows, and 0.2 cattle of unknown sex. A total of 3447 cattle were managed by the 462 households, including 578 which were mafisa'd in, but excluding 269 which were owned but mafisa'd out.

Sheep were generally held in much larger flocks than cattle, though fewer households (250) reported sheep than cattle. The average size of sheep flocks managed was 54.6, for a total of 13,654 sheep. The average number mafisa'd in was 2.8 and the average number mafisa'd out was 2.1. The data indicate that sheep holdings were concentrated in a relatively small number of households. While the mean number of sheep managed was 43.3, the modem holding is the one to five category, with this category managing 4.9 percent of the sheep. Approximately half of the sheep were managed by 2.6 percent of the households.

Goat ownership and management is reported in table 4.3. The data indicate that 235 households managed an average of 37.5 goats, for a total of 8,808. An average of 2.7 goats were mafisa'd out, and an average of 2.1 were mafisa'd in. Goat ownership was also concentrated. While the modem goat flock size was between one and twenty goats, 59.6 percent of the goats were held in flocks greater than 50.

Horses and donkeys were held by 273 and 250 households respectively, but no herd greater than 15 horses or donkeys was reported. The modem ownership category for both horses and donkeys is one to five, and this category also owned the majority of the horses and donkeys. The mean number of horses managed was 2.4, while the mean number of donkeys managed was 2.5. A total of 644 horses and 617 donkeys were reported managed by all households.

Table 4.1: Inventories of Adult Cattle, June 1985

n = 537
no. of cattle managers = 462

Inventory 1985	% of households and number of cattle										Mean per cattle holding	Mean for all households
	0	1	2	3	4	5	6-10	11-20	>20	Total		
Bulls - % of HH	53.8	32.1	10.1	3.2	0.2	0.4	0.2	-	-			
- no. of bulls	0	171	108	51	4	10	7	-	-	351	0.76	0.65
Oxen - % of HH	41.1	17.3	15.8	7.9	5.4	4.7	5.6	1.9	0.4			
- no. of oxen	0	92	168	126	116	125	226	134	58	1045	2.26	1.94
Cows - % of HH	15.1	20.3	14.9	12.1	11.1	5.6	15.6	4.3	0.9			
- no. of cows	0	108	158	192	236	150	619	340	159	1962	4.25	3.65
Sex unknown (cows, bulls & oxen) - % HH	33.3	16.7	-	8.3	-	-	16.7	16.6	8.3			
- no. of sex unknown	0	12	-	3	-	-	16	30	28	89	0.19	0.16
Total cattle managed*	0	383	434	372	356	285	868	504	245	3447	7.46	6.42
Mafisa in - % of HH	74.4	6.1	5.0	1.7	3.2	2.4	5.2	1.2	0.7			
- no. of cattle	0	33	54	27	68	65	213	92	91	578	1.25	1.08
Mafisa out - % of HH	87.2	4.8	1.5	1.3	1.9	0.6	2.0	0.6	0.2			
- no. of cattle	0	26	16	21	40	15	77	46	28	269	0.58	0.50

* Total cattle managed is the sum of bulls, oxen, cows and sex unknown. It does not include calves born during the year or cattle mafisa'd out but does include cattle mafisa'd in.

Table 4.2: Inventories of Adult Sheep, June 1985

n = 537
number of sheep managers= 250

	% of households and number of sheep												
nventory 1985	0	1-5	6-10	11-20	Mean 21-50	Mean 51-100	101 -200	201 -300	301 -400	>400	Total	per sheep for holding	all hh
ams - % of HH	72.2	26.1	0.8	0.4	0.4	-	-	-	-	-			
- no. of rams	0	212	35	40	61	-	-	-	-	-	348	1.39	0.65
ethers - % of HH	72.8	15.7	2.7	3.8	2.5	1.5	0.2	0.2	0.2	-			
- no. of wethers	0	196	99	283	369	585	310	290	400	-	2532	10.13	4.72
wes - % of HH	51.0	19.0	8.9	9.4	7.3	2.3	1.9	0.4	.2	-			
- no. of ewes	0	241	332	697	1147	720	1328	427	353	-	5245	20.98	9.77
ex unknown - % of HH	-	1.0	13.8	15.5	20.7	13.6	15.5	1.7	-	8.6			
- no. of sheep	-	20	72	155	445	607	1299	227	-	2704	5529	22.12	10.30
otal adult sheep managed*	0	669	538	1175	2022	1912	2937	944	753	2704	13654	54.62	25.43
heep mafisa in - % of HH	91.1	3.0	1.3	1.9	1.6	1.1	-	-	-	-			
- no. of sheep	0	46	57	145	279	176	-	-	-	-	703	2.81	1.31
heep mafisa out - % of HH	90.1	4.5	2.2	2.2	1.0	-	-	-	-	-			
- no. of sheep	0	64	99	186	176	-	-	-	-	-	525	2.10	0.98

Total sheep managed is the sum of rams, wethers, females and sex unknown. It does not include lambs born during the year or sheep mafisa'd out but does include sheep mafisa'd in.

Table 4.3: Inventories of Goats, June 1985

n = 537

no. of goat managers = 235

% of households and number of goats

Inventory 1985	0	1-5	6-10	11-20	21-50	51-200	101 -200	201 -300	301 -400	>400	Total	Mean per goat holding	Mean for all hh
Billy - % of HH	72.8	23.7	1.6	1.4	.4	-	-	-	-	-			
- no. of billies	0	196	68	123	80	-	-	-	-	-	467	1.99	0.87
Wethers - % of HH	70.8	19.2	4.1	3.5	1.7	.4	-	.2	-	-			
- no. of wethers	0	223	151	243	258	116	-	300	-	-	1291	5.49	2.40
Female Goats - % of HH	51.4	20.9	10.2	7.4	7.0	2.5	.6	-	-	-			
- no. of does	0	288	380	552	1062	834	371	-	-	-	3487	14.84	6.49
Sex unknown - % of HH	-	6.2	14.6	16.7	20.8	12.5	4.2	2.1	2.1	2.1			
- no. of goats	0	5	54	126	325	649	774	430	400	800	3563	15.16	6.64
Total goats managed * - % of HH	0	712	653	1044	1725	1599	1145	730	400	800	8088	37.48	16.40
Goats mafisa in - % of HH	90.6	3.2	2.4	2.4	1.0	0.4	-	-	-	-			
- no. of goats	0	46	109	197	159	132	-	-	-	-	643	2.74	1.20
Goats mafisa out - % of HH	88.3	5.6	3.9	1.5	0.8	-	-	-	-	-			
- no. of goats	0	82	161	117	138	-	-	-	-	-	498	2.12	0.93

* Total goats managed is the sum of billies, wethers, does, and sex unknown. It does not include kids born during the year or goats mafisa'd out. It does include goats mafisa'd in.

Table 4.4: Horses Inventory

n = 537

no. of horse managers = 273

	% of households and number of horses										
	0	1	2	3	4	5	6-10	11-20	Total	Mean per horse holding	Mean for all hh
Inventory 1985											
Male horses >1 year - % of HH	72.8	17.9	6.3	2.1	.4	.2	.4	-			
- no. of horses	0	96	68	33	8	5	17	-	227	0.83	0.42
Female horses >1 year - % of HH	74.4	16.8	5.4	.9	1.3	.6	.6	-			
- no. of horses	0	90	58	15	28	15	19	-	225	0.82	0.42
Male horses age unknown - % of HH	89.0	6.7	2.2	1.3	.4	-	.2	.2			
- no. of horses	0	36	24	21	8	-	6	11	106	0.39	0.20
Female horses age unknown - % of HH	91.4	4.1	3.0	.6	.6	.2	.2	-			
- no. of horses	0	22	32	9	12	5	6	-	86	0.32	0.16
Total horses managed *	0	244	182	78	56	25	48	11	644	2.36	1.20
Horses mafisa in - % of HH	92.5	7.5	-	-	-	-	-	-			
- no. of horses	0	53	-	-	-	-	-	-	53	0.19	0.10
Horses mafisa out - % of HH	93.8	6.2	-	-	-	-	-	-			
- no. of horses	0	57	-	-	-	-	-	-	57	0.21	0.11

* Total horses managed is the sum of male, female, and horses of unknown sex olde than one year. Does not include foal born during the year or horses mafisa'd out. It does include horses mafisa'd in.

Table 4.5: Donkeys Inventory

	% of households and number of donkeys					
	0	1	2	3	4	5
Inventory 1985						
Male donkeys >1 year - % of HH	76.9	14.9	4.3	2.8	.4	.6
- no. of donkeys	0	80	46	45	8	15
Male donkeys age unknown - % HH	90.7	5.2	2.2	1.1	.2	-
- no. of donkeys	0	28	24	18	4	-
Female donkeys >1 year - % of HH	77.6	14.6	4.1	2.4	.7	.4
- no. of donkeys	0	78	44	39	16	10
Female donkeys age unknown - % HH	90.0	4.7	1.9	1.7	.4	-
- no. of donkeys	0	25	20	27	8	-
Total donkeys managed *	0	211	134	129	36	25
Donkeys mafisa in - % of HH	95.0	2.1	1.3	0.9	0.6	-
- no. of donkeys	0	11	14	15	12	-
Donkeys mafisa out - % of HH	96.6	2.4	0.2	0.2	0.2	-
- no. of donkeys	0	13	2	3	4	-

n = 537

no. of donkey managers = 250

6-10	11-20	Total	Mean per donkey holding	Mean for all hh
-	.2			
-	20	214	0.86	0.40
.6	-			
16	-	96	0.36	0.18
.2	-			
6	-	193	0.77	0.36
.4	.2			
20	20	120	0.48	0.22
42	40	617	2.47	1.15
0.2	-			
6	-	58	0.23	0.11
0.4				
13	-	35	0.14	0.07

5. HERD ADDITIONS AND SUBTRACTIONS

Survey respondants were asked to provide a full accounting of all additions and subtractions of livestock from household herds during the year June 1, 1983 to May 31, 1984. Other than through births (summarized in table 5.1), livestock are added to herds through purchases, trades, gifts, or bohali (bridewealth) transfers. Livestock are subtracted from herds through death, gifts, bohali transfers, sales, trades, home slaughter, and theft. (Respondants were willing to provide information on losses due to theft but for obvious reasons no attempt was made to question respondants on their herd increases due to theft.)

The herd addition -- subtraction data are vital background information for analysts and policy makers concerned with livestock development in Lesotho. Data on livestock births establishes the fertility of the alternative species under different climatic and management conditions. The acquisition and disposition data establish the absolute and relative importance of the alternative ways available for rural households to acquire and dispose of livestock. They also indicate the types of animals, by sex and by species, which are sold, traded, purchased, and used in bohali transfers.

HERD ADDITIONS THROUGH BIRTHS

The number of adult females and the number of progeny born to those females are reported for each species in table 5.1. For cattle, sheep and goats the number of adult females is seperated into the number specified by the respondants, and an estimate of the number of females amongst adult animals of unknown sex. This estimate is based on the ratio of reported females to reported males summarized in section 4. Progeny are seperated into those born dead, those which died during the year, and those alive at the time of the survey. Summary statistics on fertility are provided by the ratios of progeny to the total number of adult females.

Of a total of 3447 adult cattle, 2013 or 58.4 percent are estimated to be females. These 2013 females gave birth to a total of 437 calves. Fifteen of these calves were born dead, 41 died during the year, and 381 were alive at the end of the year. The percentage of live calves to adult females is 18.9 percent. This low fertility rate is caused by a number of factors, mostly related to management and nutritional status of the females. Most females do not become pregnant until their third or fourth years, then calve every second or third year for the next seven to eight years. Most cows are thus only expected to produce three to four calves during their productive lives.

The sheep population was found to be significantly more prolific than the cattle population, and a greater proportion of the adult sheep flock was found to be female. Of a total of 13654 adult sheep, 8814 were estimated to be female (64.6 percent). 2586 lambs were born to the ewes, for a percentage of 23.9. The most alarming statistic for sheep is the number of lambs which died during the year (18.6 percent of those born). Low milk production by the lactating ewes and poor herd management are the most likely causes of this lamb mortality.

The fertility pattern of the goat flock was relatively similar to the sheep flock. The percentage of females in the adult herd was higher (72.4 percent), as was the overall fertility (30.3 percent). The largest difference between the two species was the percentage of progeny which died. Of the 1689 kids born alive, an alarming 36.4 percent died during the year. As sheep and goats are generally managed together, the difference (36.4 percent compared to 18.6 percent) is likely due to the greater fragility of the young kids. Late winter frosts and snows have been known to kill large numbers of newly-born kids.

It appears that more care is taken with horse and donkey foals. Of the 87 horse and 70 donkey foals born during the year, none were reported to have died.

OTHER HERD ACQUISITIONS AND DISPOSITIONS

In table 5.2 the acquisitions and dispositions of male cattle are summarized. Only 5.5 percent of the households purchased a total of 63 male cattle, while 4.4 percent of the households acquired 39 animals through gifts or bohali transfers. A total of 247 male cattle left the herds during the year. This represented an aggregate offtake rate of 16.7 percent of the male cattle herd, including those live animals which were transferred from one household to another. Of these 247 animals, 24.7 percent died, 14.2 percent were given away or transfered out through bohali, 30.4 percent were sold or traded, 18.6 percent were slaughtered, and 12.1 percent were stolen.

The data for male cattle can be compared with the acquisition--disposition data for female cattle displayed in table 5.3. From that table it can be seen that 51 female cattle were purchased during the year, while 58 were acquired and a like number disposed of through gift or bohali. Of a total disposition of 268 female cattle (for an aggregate offtake rate of 13.3 percent), 43.3 percent died, 9.3 percent were sold or traded, 15.3 percent were slaughtered, and 9.0 percent were stolen. From this data it appears that there is a more active market in male cattle than female cattle, and that more mature male cattle are slaughtered rather than allowed to die.

Table 5.4 presents information on additions of male and female sheep. The acquisition of a total of 145 females, compared to only 43 males, indicates a greater demand for females than males for herd construction. This preferential demand for females is supported by the herd subtraction data presented in table 5.5. Of a total of 867 male sheep which left the herds during the year, only 10.6 percent died, 20.0 percent were sold or traded, while nearly half (51.2 percent) were slaughtered. On the other hand over a third (34.0 percent) of the 565 disposed female sheep died, 23.4 percent were slaughtered, and 16.2 percent were sold or traded. Stockowners obviously prefer to have a high female / male sheep population, and react by selling or slaughtering males relatively readily while females are more often kept until they die from other causes. The numbers of sheep reported stolen are striking. A total of 487 sheep were stolen during the year.

Tables 5.6 and 5.7 indicate that the addition -- subtraction situation

of goats is very similar to the one for sheep. Of a total of 97 goats purchased during the year, 87 were female. Equal numbers of male and female goats died during the year, but only 74 female goats were slaughtered, compared to 175 male goats slaughtered. Tables 5.8 and 5.9 indicate that death is the dominant way that horses and donkeys leave herds, indicating a general reluctance to sell, trade or otherwise dispose of these animals.

Table 5.1: Livestock Progeny Born During the Preceeding Year, by Species

number of animals

n = 537

	0	1-5	6-10	11-20	21-50	51-100	101 -200	201 -300	301 -400	>400	Total	% of females
Cattle (no. of cattle holders = 437)												
Cows - no. specified	0	844	619	340	159	-	-	-	-	-	1962	
- est. of sex unknown *	0	9	9	17	16	-	-	-	-	-	51	
Calves - born dead	0	15	-	-	-	-	-	-	-	-	15	0.7
- died during year	0	31	10	-	-	-	-	-	-	-	41	2.0
- alive	0	326	30	-	25	-	-	-	-	-	381	18.9
Sheep (no. of sheep holders = 250)												
Ewes - no. specified	0	241	332	697	1147	720	1328	427	353	-	5245	
- est. of sex unknown *	0	13	46	100	287	392	839	147	-	1746	3569	
Lambs - died during year	0	104	74	63	129	-	110	-	-	-	480	5.4
- alive	0	160	195	392	466	373	260	260	-	-	2106	23.9

Table 5.1 (continued)

	0	1-5	6-10	11-20	21-50	51-100	101 -200	201 -300	301 -400	>400	Total	% of femal
Goats (no. of goat holders = 237)												
Nannies - no. specified	0	288	380	552	1062	834	371	-	-	-	3487	
- est. of sex unknown *	0	3	36	84	216	431	515	286	266	532	2369	
Kids - born dead	0	19	10	29	30	-	-	-	-	-	88	1.5
- died during year	0	173	65	73	304	-	-	-	-	-	615	10.5
- alive	0	237	196	316	325	-	-	-	-	-	1074	18.3
Horses (no. of horse holders = 273)												
Mares - no. specified	0	286	25	-	-	-	-	-	-	-	311	
Foal - alive	0	87	-	-	-	-	-	-	-	-	87	28.0
Donkeys (no. of donkey holders = 250)												
Mares - no. specified	0	267	46	-	-	-	-	-	-	-	313	
Foal - alive	0	70	-	-	-	-	-	-	-	-	70	22.4

* Many of the respondants did not indicate the sex of their adult cattle, sheep and goats. To generate an estimate of the total number of adult females, therefore, it was assumed that those flocks and herds had the same female to male ratios as were reported by those households which did specify the sex of their adult animals.

Table 5.2: Acquisition and Disposition of Male Cattle

n = 537

% of households and number of cattle — no. of cattle managers = 462

	0	1	2	3	4	5	6-10	11-15	16-20	>20	Total Cattle	Missing Cases
Acquisitions												
Purchased/traded - % of HH	94.6	3.2	1.9	-	-	-	0.2	-	0.2	-		
- no. of cattle	0	17	20	-	-	-	6	-	20	-	63	4
Gift/bohali - % of HH	95.7	2.3	1.5	0.2	0.4	-	-	-	-	-		
- no. of cattle	0	12	16	3	8	-	-	-	-	-	39	4
Total acquisitions	0	29	36	3	8	-	6	-	20	-	102	
Dispositions												
Died - % of HH	91.8	5.1	2.2	0.4	-	-	0.2	-	-	-		
- no. of cattle	0	25	22	6	8	-	7	-	-	-	61	4
Gift/bohali - % of HH	97.0	1.1	1.1	0.4	-	0.2	0.2	-	-	-		
- no. of cattle	0	6	12	6	-	5	6	-	-	-	35	4
Sold/traded - % of HH	90.6	5.6	2.4	0.9	0.2	-	-	-	-	-		
- no. of cattle	0	30	26	15	4	-	-	-	-	-	75	4
Butchered - % of HH	91.7	6.5	0.8	0.4	-	-	-	-	-	-		
- no. of cattle	0	32	8	6	-	-	-	-	-	-	46	4
Stolen - % of HH	97.6	0.9	0.8	0.4	0.2	-	0.2	-	-	-		
- no. of cattle	0	5	8	6	4	-	7	-	-	-	30	4
Total dispositions	0	98	76	39	16	5	13	-	-	-	247	

Table 5.3: Acquisition and Disposition of Female Cattle

n = 537

% of households and number of cattle — number of cattle managers = 462

	0	1	2	3	4	5	6-10	11-15	16-20	>20	Total Cattle	Missing Cases
Acquired												
Purchased/traded - % of HH	99.3	4.2	1.6	0.6	0.2	-	-	-	-	-		4
- no. of cattle	0	22	16	9	4	-	-	-	-	-	51	
Gift/bohali - % of HH	96.1	1.7	0.8	0.6	0.6	-	0.4	-	-	-		4
- no. of cattle	0	9	8	9	12	-	20	-	-	-	58	
Total acquisitions	0	31	24	18	16	-	20	-	-	-	109	
Dispositions												
Died - % of HH	86.5	6.5	5.3	0.8	0.2	0.4	0.2	-	-	-		
- no. of cattle	0	32	52	12	4	10	6	-	-	-	116	5
Gift/bohaldi - % of HH	95.7	1.3	1.9	0.6	-	0.2	0.4	-	-	-		
- no. of cattle	0	7	20	9	-	5	17	-	-	-	58	5
Sold/traded - % of HH	96.8	3.2	0.8	-	-	-	-	-	-	-		
- no. of cattle	0	17	8	-	-	-	-	-	-	-	25	5
Butchered - % of HH	93.2	5.8	0.9	-	-	-	-	-	-	-		
- no. of cattle	0	31	10	-	-	-	-	-	-	-	41	5
Stolen - % of HH	98.3	0.8	0.4	-	0.2	0.2	0.2	-	-	-		
- no. of cattle	0	4	4	-	4	5	7	-	-	-	24	4
Payment of shepherd	99.4	0.3	-	0.3	-	-	-	-	-	-		
	0	1	-	3	-	-	-	-	-	-	4	202
Total dispositions	0	92	94	24	8	20	30	-	-	-	268	

Table 5.4: Acquisition of Sheep

n = 537
% of households and number of sheep — no. of sheep managers = 250

Males	0	1	2	3	4	5	6-10	11-15	16-20	>20	Total
Purchased/traded - % of HH	97.7	1.0	0.4	0.4	-	-	0.2	0.2	-	-	
- no. of sheep	0	5	4	6	-	-	6	15	-	-	36
Gift/bohali - % of HH	89.0	-	0.2	-	-	0.2	-	-	-	-	
- no. of sheep	0	-	2	-	-	5	-	-	-	-	7
Total acquisitions	0	5	6	6	-	5	6	15	-	-	43
Females											
Purchased/traded - % of HH	94.8	1.5	1.3	0.2	0.2	0.6	1.0	0.2	0.2	-	
- no. of sheep	0	7	12	3	4	15	38	12	20	-	111
Gift/bohali - % of HH	99.4	-	0.2	-	-	-	.2	.2	-	-	
- no. of sheep	0	-	2	-	-	-	7	15	-	-	24
Payment of shepherds - % HH	99.7	-	-	-	-	-	.3	-	-	-	
- no. of sheep	0	-	-	-	-	-	10	-	-	-	10
Total acquisitions	0	7	14	3	4	15	55	27	20	-	145
Sex unknown											
Purchased/traded - % of HH	84.2	3.5	-	1.8	3.5	-	5.3	1.8	-	-	
- no. of sheep	0	2	-	3	8	-	26	14	-	-	53
Gift/bohali - % of HH	96.5	1.8	-	-	-	-	-	1.8	-	-	
- no. of sheep	0	1	-	-	-	-	-	11	-	-	12
Total acquisitions	0	3	-	3	8	-	26	25	-	-	65

Table 5.5: Disposition of Sheep

n = 537

% of households and number of sheep — no. of sheep managers = 250

	0	1	2	3	4	5	6-10	11-15	16-20	>20	Total
Males											
Died - % of HH	92.9	3.3	1.5	0.4	0.6	0.2	0.8	0.2	-	-	
- no. of sheep	0	16	14	6	4	5	32	15	-	-	92
Gift - % of HH	98.5	-	0.2	0.4	0.2	-	0.2	0.4	-	-	
- no. of sheep	0	-	2	6	4	-	8	27	-	-	47
Sold/traded - % of HH	93.8	1.5	1.7	0.6	0.4	0.6	1.0	-	0.2	0.2	
- no. of sheep	0	7	16	9	8	15	39	-	20	60	174
Butchered - % of HH	77.2	8.8	4.0	3.3	1.3	1.7	2.1	1.3	0.2	0.2	
- no. of sheep	0	42	38	48	24	40	75	82	20	30	399
Stolen - % of HH	96.7	1.3	0.2	0.4	0.4	0.2	0.2	-	0.4	0.2	
- no. of sheep	0	6	2	6	8	5	8	-	20	100	155
Total dispositions	0	71	72	75	48	65	162	124	60	190	867
Females											
Died - % of HH	89.6	3.1	2.3	1.7	0.4	-	1.8	0.6	0.2	-	
- no. of sheep	0	15	22	24	8	-	65	38	20	-	192
Gift/bohali - % of HH	98.8	-	0.4	-	0.4	-	-	.2	.2	-	
- no. of sheep	0	-	4	-	8	-	-	15	17	-	44
Sold/traded - % of HH	94.6	1.5	1.7	0.2	0.8	0.4	0.6	-	0.2	-	
- no. of sheep	0	7	16	3	16	10	20	-	20	-	92
Butchered - % of HH	88.3	5.9	2.3	1.0	1.0	0.6	0.8	-	-	-	
- no. of sheep	0	28	22	15	20	15	32	-	-	-	132
Stolen - % of HH	96.7	0.8	0.6	0.4	0.4	-	0.6	-	0.2	0.2	
- no. of sheep	0	4	6	6	8	-	25	-	20	36	105
Total dispositions	0	54	70	48	60	25	142	53	77	36	565

Table 5.5 Continued: Disposition of Sheep

n = 537
% of households and number of sheep — no. of sheep managers = 250

Sex Unknown	0	1	2	3	4	5	6-10	11-15	16-20	>20	Total
Died - % of HH	97.3	1.0	-	0.3	0.7	-	-	0.3	0.2	-	
- no. of sheep	0	3	-	3	8	-	-	11	20	-	45
Sold/traded - % of HH	85.6	1.8	-	1.8	1.8	1.8	1.8	-	-	5.4	
- no. of sheep	0	1	-	3	4	5	7	-	-	254	274
Slaughtered - % of HH	96.4	0.7	0.7	-	0.7	0.3	0.7	0.3	-	-	
- no. of sheep	0	2	4	-	8	5	13	15	-	-	47
Gift/bohali - % of HH	98.2	-	-	-	-	-	-	1.8	-	-	
- no. of sheep	0	-	-	-	-	-	-	11	-	-	11
Stolen - % of HH	80.7	-	3.5	-	-	-	5.4	5.3	-	5.4	
- no. of sheep	0	-	4	-	-	-	25	42	-	156	227
Lost - % of HH	99.6	.4	-	-	-	-	-	-	-	-	
- no. of sheep	0	1	-	-	-	-	-	-	-	-	1
Payment Shepherds - % HH	82.5	1.8	-	1.8	5.3	-	3.5	1.8	-	3.6	
- no. of sheep	0	1	-	3	12	-	20	11	-	224	271
Total dispositions	0	8	8	9	32	10	65	90	20	634	876

Table 5.6: Acquisition of Goats

n = 537

% of households and number of goats — no. of goat managers = 235

	0	1	2	3	4	5	6-10	11-15	16-20	>20	Total
Males											
Purchased/traded - % of HH	98.8	0.6	0.4	0.2	-	-	-	-	-	-	
- no. of goats	0	3	4	3	-	-	-	-	-	-	10
Gift/bohali - % of HH	99.2	-	0.2	-	-	0.2	.4	-	-	-	
- no. of goats	0	-	2	-	-	5	14	-	-	-	21
Died - % of HH	93.4	2.5	1.2	0.6	0.7	0.9	.2	.2	-	-	
- no. of goats	0	12	12	9	16	25	8	14	-	-	96
Mafisa - % of HH	98.8	0.4	-	0.4	0.4	-	-	-	-	-	
- no. of goats	0	1	-	3	4	-	-	-	-	-	8
Total acquisitions	0	16	18	15	20	30	22	14	-	-	135
Females											
Purchased/traded - % of HH	95.5	1.8	1.2	0.2	-	0.2	0.4	0.4	-	0.2	
- no. of goats	0	9	12	3	-	5	16	12	-	30	87
Gift/bohali - % of HH	98.8	0.4	0.4	-	0.2	0.2	-	-	-	-	
- no. of goats	0	2	4	-	4	5	-	-	-	-	15
Mafisa - % of HH	99.2	-	-	-	0.4	0.4	-	-	-	-	
- no. of goats	0	-	-	-	4	5	-	-	-	-	9
Payment for plowing - % HH	99.8	0.2	-	-	-	-	-	-	-	-	
- no. of goats	0	1	-	-	-	-	-	-	-	-	1
Exhange for shoes - % of HH	99.8	0.2	-	-	-	-	-	-	-	-	
- no. of goats	0	1	-	-	-	-	-	-	-	-	1
Total acquisitions	0	13	16	3	8	15	16	12	-	30	113
Sex unknown											
Purchased/traded - % of HH	98.0	2.0	-	-	-	-	-	-	-	-	
- no. of goats	0	1	-	-	-	-	-	-	-	-	1
Total acquisitions	0	1	-	-	-	-	-	-	-	-	1

Table 5.7: Disposition of Goats

n = 537

% of households and number of goats — no. of goat managers = 235

	0	1	2	3	4	5	6-10	11-15	16-20	>20	Total
Males											
Died - % of HH	93.4	2.5	1.2	0.6	0.8	1.0	0.2	0.2	-	-	
- no. of goats	0	12	12	9	16	25	8	14	-	-	96
Sold/traded - % of HH	95.1	2.5	1.0	0.6	0.4	-	0.4	-	-	-	
- no. of goats	0	12	10	9	8	-	16	-	-	-	55
Butchered - % of HH	85.9	7.0	1.6	2.0	1.8	0.4	0.4	0.2	0.2	-	
- no. of goats	0	34	16	30	36	10	17	12	20	-	175
Stolen - % of HH	99.0	0.2	0.2	0.2	-	-	0.2	0.2	-	-	
- no. of goats	0	1	2	3	-	-	10	14	-	-	30
Lost - % of HH	99.0	-	-	0.4	-	-	0.6	-	-	-	
- no. of goats	0	-	-	6	-	-	19	-	-	-	25
Total dispositions	0	59	40	57	60	35	71	40	20	-	381
Females											
Gift/bohali - % of HH	97.1	0.2	0.8	0.2	0.2	-	0.4	0.2	0.2	0.6	
- no. of goats	0	1	8	3	4	-	16	15	20	79	146
Sold/traded - % of HH	96.9	1.0	0.4	0.4	0.2	0.6	0.4	-	-	-	
- no. of goats	0	5	4	6	4	15	20	-	-	-	54
Butchered - % of HH	89.9	7.0	2.3	0.2	0.2	0.2	0.2	-	-	-	
- no. of goats	0	34	22	3	4	5	6	-	-	-	74
Stolen - % of HH	97.7	0.8	0.8	-	-	-	0.6	-	-	-	
- no. of goats	0	1	8	-	-	-	24	-	-	-	33
Died - % of HH	88.9	4.2	4.2	0.2	0.2	0.4	0.6	0.2	-	-	
- no. of goats	0	12	24	3	4	12	27	15	-	-	97
Total dispositions	0	53	66	15	16	32	93	30	20	79	404

Table 5.7 Continued: Disposition of Goats

n = 537

% of households and number of goats

no. of goat managers = 235

	0	1	2	3	4	5	6-10	11-15	16-20	>20	Total
Sex Unknown											
Died - % of HH	96.9	0.7	-	1.0	-	-	0.6	-	-	0.6	
- no. of goats	0	2	-	9	-	-	15	-	-	53	79
Bohali - % of HH	98.0	2.0	-	-	-	-	-	-	-	-	
- no. of goats	0	10	-	-	-	-	-	-	-	-	10
Sold/traded - % of HH	89.8	2.0	2.0	-	-	-	-	-	2.0	4.0	
- no. of goats	0	1	2	-	-	-	-	-	17	57	77
Stolen - % of HH	90.2	-	2.0	2.0	-	-	4.0	2.0	-	-	
- no. of goats	0	-	2	3	-	-	16	12	-	-	33
Slaughtered - % of HH	98.6	1.0	-	-	-	0.3	-	-	-	-	
- no. of goats	0	3	-	-	-	5	-	-	-	-	8
Total dispositions	0	16	4	12	-	5	31	12	17	110	207

Table 5.8: Acquisition and Disposition of Horses

n = 537

% of households and number of horses — no. of horse managers = 273

	0	1	2	3	4	5	6-10	11-15	16-20	>20	Total
Acquisition											
Foals purchased - % of HH	99.3	0.6	0.2	-	-	-	-	-	-	-	
- no. of horses	0	4	10	-	-	-	-	-	-	-	14
Horses purchased - % of HH	95.7	5.4	0.7	-	-	-	-	-	-	-	
- no. of horses	0	29	8	-	-	-	-	-	-	-	37
Gift/bohali - % of HH	98.1	1.3	0.6	-	-	-	-	-	-	-	
- no. of horses	0	7	6	-	-	-	-	-	-	-	13
Total acquisitions	0	40	24	-	-	-	-	-	-	-	64
Disposition											
Bohali - % of HH	99.1	0.6	-	0.4	-	-	-	-	-	-	
- no. of horses	0	3	-	6	-	-	-	-	-	-	9
Sold/Traded - % of HH	97.2	2.2	0.4	0.2	-	-	-	-	-	-	
- no. of horses	0	12	4	3	-	-	-	-	-	-	19
Butchered - % of HH	99.8	0.2	-	-	-	-	-	-	-	-	
- no. of horses	0	1	-	-	-	-	-	-	-	-	1
Stolen - % of HH	97.4	1.7	0.4	0.4	0.2	-	-	-	-	-	
- no. of horses	0	9	4	6	4	-	-	-	-	-	23
Deaths - % of HH	97.6	3.7	1.0	0.3	-	-	-	-	-	-	
- no. of horses	0	11	6	3	-	-	-	-	-	-	20
Total dispositions	0	36	14	18	4	-	-	-	-	-	72

Table 5.9: Acquisition and Dispostion of Donkeys

n = 537
% of households and number of donkeys — no. of donkey managers = 250

	0	1	2	3	4	5	6-11	11-15	Total
Acquisition									
Bought - % of HH	95.5	3.5	0.4	0.2	-	-	.4	-	
- no. of donkeys	0	19	4	3	-	-	20	-	46
Gift/bohali - % of HH	97.4	1.7	0.2	0.6	-	.2	-	-	
- no. of donkeys	0	9	2	9	-	5	-	-	25
Mafisa - % of HH	99.8	0.2	-	-	-	-	-	-	
- no. of donkeys	0	2	-	-	-	-	-	-	2
Total acquisitions	0	30	6	12	-	5	20	-	73
Disposition									
Died - % of HH	98.1	3.0	-	-	-	-	-	-	
- no. of donkeys	0	8	-	-	-	-	-	-	8
Bohali - % of HH	98.9	0.4	0.7	-	-	-	-	-	
- no. of donkeys	0	2	8	-	-	-	-	-	10
Sold - % of HH	98.7	1.1	0.2	-	-	-	-	-	
- no. of donkeys	0	6	2	-	-	-	-	-	8
Stolen - % of HH	98.7	0.7	0.2	0.2	0.2	-	-	-	
- no. of donkeys	0	4	2	3	4	-	-	-	13
Total dispositions	0	20	12	3	4	-	-	-	39

6. LIVESTOCK MARKETING

In the previous section general information was presented on additions and subtractions to the livestock herds of the surveyed households. Information in that section indicates that one of the ways in which animals are added to herds is through purchases, while one of the methods of disposition is through sales. In this section the purchase and sale data is examined in more detail. Specifically, the types and location of buyers and sellers are designated for male and female animals of each species.

The information presented in this section will prove valuable for future livestock marketing initiatives in Lesotho. The information establishes the absolute and relative importance of the alternative market outlets available to rural Basoto stockowners. Some of the possible market outlets are the National Abattoir -- Feedlot Complex, the Livestock Products Marketing Service rural auction sales, butcheries, sale to individuals in neighbouring villages, and sale to individuals in the local village community.

Cattle purchases are reported in tables 6.1 and 6.2, and cattle sales are reported in tables 6.3 and 6.4. The dominant market outlets for both purchases and sales of cattle were the 'informal' market outlets which link stockowners together. Over half (62.2 percent) of the male and female cattle purchased were purchased from farmers in the same village or nearby villages, 31.5 percent were purchased from South African sellers, 1.8 percent were purchased from the National Feedlot, and 4.5 percent were purchased from other sources (table 6.1 and 6.2). Data on tables 6.3 and 6.4 indicate a very similar pattern for sales. 82 percent of the animals were sold to farmers in the same village or nearby villages, 16 percent were sold to local butcheries, one percent to South African buyers, and one percent to other buyers.

Informal market outlets also dominated purchases and sales of sheep. Of a total of 183 sheep purchases, 135 were purchased from farmers in the same village, 18 from farmers in nearby villages, and 30 from other sources (tables 6.5 to 6.7). Sheep sales were much higher than purchases-- a total of 534 sheep were sold -- but again the informal market channels were most important. 67.2 percent of the sheep were sold to farmers in the same village, 18.9 percent were sold to farmers in nearby villages, 6.6 percent were sold to butchers, and another 13.7 percent were sold to other buyers (tables 6.8 to 6.10). The surveyed households illustrated a marked preference for purchasing female sheep and selling male sheep, though the respondants often did not know the sex of the sheep purchased or sold.

Data on purchases and sales of goats indicate similar patterns to sheep transactions, with far less goats than sheep traded. Only 88 goat purchases and 183 goat sales were reported. Farmers in the same village or nearby village represented the principal market channel for goat purchases (95.5 percent of all purchases), and for goat sales (99 percent of all sales). Most of the purchased goats were female (90.1 percent), while equal numbers of male and female goats were sold (tables 6.11 to 6.15).

There were very transactions involving horses or donkeys. While horse

purchases were low (37), horse sales were even lower (15). All of the transactions involving horses were conducted with local farmers (tables 6.16 and 6.17). Donkey transactions illustrated a much different pattern than any of the other livestock species. Of 46 donkeys purchased, only 21 percent were purchased from local farmers, while 20 percent were purchased in South Africa, and 5 percent were purchased elsewhere. All eight donkeys marketed were sold to farmers in the same village.

Table 6.1: Number and Source of Purchased Male Cattle

n = 537
no. of cattle managers = 462

From whom purchased	0	1	2	3	4	5	6-10	>10	Total Cattle	Missing Cases
Farmer - same village - % HH	97.6	1.7	0.8	-	-	-	-	-		
- no. of cattle	0	9	8	-	-	-	-	-	17	4
Farmer - another village										
- % of HH	97.7	1.5	0.8	-	-	-	-	-		
- no. of cattle	0	8	8	-	-	-	-	-	16	4
South African Seller - % HH	99.6	0.2	-	-	-	-	0.2	0.2		
- no. of cattle	0	1	-	-	-	-	6	20	27	4
MOA - % of HH	99.3	-	-	-	-	-	-	-		
- no. of cattle	0	-	-	-	-	-	-	-	-	4
Feedlot - % of HH	99.3	-	-	-	-	-	-	-		
- no. of cattle	0	-	-	-	-	-	-	-	-	4
Auction - % of HH										
- no. of cattle										
Other - % of HH	99.3	-	-	-	-	-	-	-		
- no. of cattle	0	-	-	-	-	-	-	-	-	4
Total Purchases	0	18	16	-	-	-	6	20	60	

Table 6.2: Number and Source of Purchased Female Cattle

From whom purchased	0	1	2	3	4	5	6-10	>10	Total Cattle	Missing Cases
Farmer - same village - % HH	97.4	1.5	0.8	0.2	-	-	-	-		
- no. of female cattle	0	8	8	3	-	-	-	-	19	4
Farmer - another village										
- % of HH	97.7	1.5	0.6	0.2	-	-	-	-		
- no. of female cattle	0	8	6	3	-	-	-	-	17	4
South African Seller - % HH	99.2	0.4	0.2	-	0.2	-	-	-		
- no. of female cattle	0	2	2	-	4	-	-	-	8	4
MOA - % of HHf	99.3	-	-	-	-	-	-	-		
- no. of female cattle	0	-	-	-	-	-	-	-	-	4
Feedlot - % of HH	99.6	0.4	-	-	-	-	-	-		
- no. of female cattle	0	2	-	-	-	-	-	-	2	4
Auction - % of HH										
- no. of female cattle										
Other - % of HH	99.4	0.4	-	0.2	-	-	-	-		
- no. of female cattle	0	2	-	3	-	-	-	-	5	4
Total Purchases	0	22	16	9	4	-	-	-	51	

Table 6.3: Number and Destination of Sold Male Cattle

n = 537
no. of cattle managers = 462

To whom sold	0	1	2	3	4	5	6-10	>10	Total Cattle	Missing Cases
Farmer - same village - % HH	95.5	2.8	1.1	0.6	-	-	-	-		
- no. of male cattle	0	15	12	9	-	-	-	-	36	4
Farmer - another village - % of HH	96.6	2.3	1.1	-	-	-	-	-		
- no. of male cattle	0	12	12	-	-	-	-	-	24	4
South Africa - % of HH	99.8	0.2	-	-	-	-	-	-		
- no. of male cattle	0	1	-	-	-	-	-	-	1	4
MOA - % of HH	-	-	-	-	-	-	-	-		
- no. of male cattle	-	-	-	-	-	-	-	-	-	
Feedlot - % of HH	100	-	-	-	-	-	-	-		
- no. of male cattle	0	-	-	-	-	-	-	-	-	4
Butcher - % of HH	98.9	0.4	0.4	0.2	0.2	-	-	-		
- no. of male cattle	0	2	4	3	4	-	-	-	13	4
Other - % of HH	99.2	0.8	-	-	-	-	-	-		
- no. of male cattle	0	1	-	-	-	-	-	-	1	4
Total Sales	0	31	28	12	4	-	-	-	75	

Table 6.4: Number and Destination of Sold Female Cattle

n = 537
no. of cattle managers = 462

To whom sold	0	1	2	3	4	5	6-10	>10	Total Cattle	Missing Cases
Farmer - same village - % HH	97.6	1.9	0.6	-	-	-	-	-		
- no. of female cattle	0	10	6	-	-	-	-	-	16	4
Farmer - another village										
- % of HH	98.9	1.1	-	-	-	-	-	-		
- no. of female cattle	0	6	-	-	-	-	-	-	6	4
South Africa - % of HH	100	-	-	-	-	-	-	-		
- no. of female cattle	0	-	-	-	-	-	-	-	-	
Butcher - % of HH	99.6	0.2	0.2	-	-	-	-	-		
- no. of female cattle	0	1	2	-	-	-	-	-	3	4
Feedlot - % of HH	100	-	-	-	-	-	-	-		
- no. of female cattle	0	-	-	-	-	-	-	-	-	
Auction - % of HH										
- no. of female cattle										
Other - % of HH	100	-	-	-	-	-	-	-		
- no. of female cattle	0	-	-	-	-	-	-	-	-	
Total Sales	0	17	8	-	-	-	-	-	25	

Table 6.5: Number and Source of Purchased Male Sheep

number of sheep

n = 537
no. of sheep managers = 250

From whom purchased	0	1	2	3	4	5	6-10	Total
Farmer - same village - % of HH	98.8	0.4	0.2	0.2	-	-	0.4	
- no. of sheep	0	2	2	3	-	-	21	28
Farmer - other village - % of HH	98.8	0.6	0.2	0.2	-	-	-	
- no. of sheep	0	3	2	3	-	-	-	8
South Africa - % of HH	100	-	-	-	-	-	-	
- no. of sheep	0	-	-	-	-	-	-	-
MOA - % of HH	100	-	-	-	-	-	-	
- no. of sheep	0	-	-	-	-	-	-	-
Auction - % of HH	100	-	-	-	-	-	-	
- no. of sheep	0	-	-	-	-	-	-	-
Other - % of HH	100	-	-	-	-	-	-	
- no. of sheep	0	-	-	-	-	-	-	-
Total Purchases	0	5	4	6	-	-	21	36

Table 6.6: Number and Source of Purchased Female Sheep

Number of sheep

No. of sheep mangers = 250

From whom purchased	0	1	2	3	4	5	6-10	Total
Farmer - same village - % of HH	96.0	1.0	1.0	0.2	0.2	0.6	0.8	
- no. of sheep	0	5	10	3	4	15	32	69
Farmer - other village - % of HH	99.4	0.4	-	-	-	-	0.2	
- no. of sheep	0	2	-	-	-	-	8	10
South Africa - % of HH	99.8	-	0.2	-	-	-	-	
- no. of sheep	0	-	2	-	-	-	-	2
MOA - % of HH	100	-	-	-	-	-	-	
- no. of sheep	0	-	-	-	-	-	-	-
Auction - % of HH	100	-	-	-	-	-	-	
- no. of sheep	0	-	-	-	-	-	-	-
Other - % of HH	99.8	-	-	0.4	-	-	0.2	
- no. of sheep	0	-	-	6	-	-	8	14
Total Purchases	0	7	12	9	4	15	48	95

Table 6.7: Number and Source of Purchased Sheep of Unknown Sex

Number of sheep

No.of sheep managers = 250

From whom purchased	0	1	2	3	4	5	6-10	11-15	Total
Farmer - same village - % of HH	93.0	1.8	-	1.8	3.5	-	5.3	-	
- no. of sheep	0	1	-	3	8	-	26	-	38
Farmer - other village - % of HH	100	-	-	-	-	-	-	-	
- no. of sheep	0	-	-	-	-	-	-	-	-
MOA - % of HH	100	-	-	-	-	-	-	-	
- no. of sheep	0	-	-	-	-	-	-	-	-
Auction - % of HH	100	-	-	-	-	-	-	-	
- no. of sheep	0	-	-	-	-	-	-	-	-
Other - % of HH	98.2	-	-	-	-	-	-	1.8	
- no. of sheep	0	-	-	-	-	-	-	14	14
Total Purchases	0	1	0	3	8	0	26	14	52

Table 6.8: Number and Destination of Sold Male Sheep

n = 537
no. of sheep managers = 250

Males	0	1	2	3	4	5	6-10	11-15	16-20	>20	Total
To whom sold											
Farmer - same village - % of HH	96.3	1.0	0.8	0.6	0.2	0.4	0.4	-	-	0.2	
- no. of sheep	0	5	8	9	4	10	17	-	-	60	113
Farmer - other village - % of HH	99.0	-	0.4	-	0.2	-	0.4	-	-	-	
- no. of sheep	0	-	4	-	4	-	16	-	-	-	24
South Africa - % of HH	100	-	-	-	-	-	-	-	-	-	
- no. of sheep	0	-	-	-	-	-	-	-	-	-	-
Butcher - % of HH	100	-	-	-	-	-	-	-	-	-	
- no. of sheep	0	-	-	-	-	-	-	-	-	-	-
Auction - % of HH	99.0	-	0.4	-	-	0.2	0.2		0.2		
- no. of sheep	0	-	4	-	-	5	6	-	20	-	35
Other - % of HH	-	-	-	-	-	-	-	-	-	-	-
- no. of sheep	-	-	-	-	-	-	-	-	-	-	-
Total Sales	0	5	16	9	8	15	39	0	20	60	172

Table 6.9: Number and Destination of Sold Female Sheep

	Number of sheep										
Females	0	1	2	3	4	5	6-10	11-15	16-20	>20	Total
To whom sold											
Farmer - same village - % of HH	96.0	1.5	1.3	0.2	0.4	0.4	0.2	-	-	-	
- no. of females	0	7	12	3	8	10	6	-	-	-	46
Farmer - other village - % of HH	99.0	-	0.6	-	0.2	-	-	-	0.2	-	
- no. of females	0	-	6	-	4	-	-	-	20	-	30
South Africa - % of HH	100	-	-	-	-	-	-	-	-	-	
- no. of females	0	-	-	-	-	-	-	-	-	-	-
Butcher - % of HH	99.8	0.2	-	-	-	-	-	-	-	-	
- no. of females	0	1	-	-	-	-	-	-	-	-	1
Other - % of HH	99.6	-	-	-	-	-	0.4	-	-	-	
- no. of females	0	-	-	-	-	-	14	-	-	-	14
Total	0	8	18	3	12	10	20	-	20	-	91

Table 6.10: Number and Destination of Sold Sheep of Unknown Sex

Number of sheep

n = 537
no. of sheep managers = 250

To whom sold	0	1	2	3	4	5	6-10	11-15	16-20	>20	Total
Farmer - same village - % of HH	66.7	-	-	-	-	-	-	-	-	33.3	
- no. of sheep	0	-	-	-	-	-	-	-	-	200	200
Farmer - other village - % of HH	91.2	-	-	1.8	1.8	1.8	1.8	-	-	1.8	
- no. of sheep	0	-	-	3	4	5	7	-	-	28	47
South Africa - % of HH	100	-	-	-	-	-	-	-	-	-	
- no. of sheep	0	-	-	-	-	-	-	-	-	-	-
Butcher - % of HH	100	-	-	-	-	-	-	-	-	-	-
- no. of sheep	0	-	-	-	-	-	-	-	-	-	-
Other - % of HH	98.2	-	-	-	-	-	-	-	-	1.8	
- no. of sheep	0	-	-	-	-	-	-	-	-	24	24
Total sold	0	-	-	3	4	5	7	-	-	252	271

Table 6.11: Number and Source of Purchased Male Goats

Number of goats

n = 537
no. of goat managers = 235

From whom purchased	0	1	2	3	4	5	6-10	11-15	16-20	>20	Total
Farmer - same village											
- % of HH	99.6	0.2	-	0.2	-	-	-	-	-	-	
- no. of goats	0	1	-	3	-	-	-	-	-	-	4
Farmer - other village											
- % of HH	99.6	0.2	-	-	-	-	-	-	-	-	
- no. of goats	0	1	-	-	-	-	-	-	-	-	1
South Africa - % of HH	99.8	-	0.2	-	-	-	-	-	-	-	
- no. of goats	0	-	2	-	-	-	-	-	-	-	2
MOA - % of HH	99.8	0.2	-	-	-	-	-	-	-	-	
- no. of goats	0	1	-	-	-	-	-	-	-	-	1
Auction - % of HH	100	-	-	-	-	-	-	-	-	-	
- no. of goats	0	-	-	-	-	-	-	-	-	-	-
Other - % of HH	100	-	-	-	-	-	-	-	-	-	
- no. of goats	0	-	-	-	-	-	-	-	-	-	-
Total Purchases	0	3	2	3	-	-	-	-	-	-	8

Table 6.12: Number and Source of Purchased Female Goats

Number of goats

n = 537
no. of sheep managers = 235

From whom purchased	0	1	2	3	4	5	6-10	11-15	16-20	>20	Total
Farmer - same village											
- % of HH	96.5	1.2	1.2	0.2	-	-	0.4	0.4	-	-	
- no. of goats	0	6	12	3	-	-	16	24	-	-	61
Farmer - other village											
- % of HH	99.0	0.6	-	-	-	0.2	0.2	-	-	-	
- no. of goats	0	3	-	-	-	5	10	-	-	-	18
South Africa - % of HH	100	-	-	-	-	-	-	-	-	-	
- no. of goats	0	-	-	-	-	-	-	-	-	-	-
MOA - % of HH	100	-	-	-	-	-	-	-	-	-	
- no. of goats	0	-	-	-	-	-	-	-	-	-	-
Auction - % of HH	100	-	-	-	-	-	-	-	-	-	
- no. of goats	0	-	-	-	-	-	-	-	-	-	-
Other	99.8	0.2	-	-	-	-	-	-	-	-	
	0	1	-	-	-	-	-	-	-	-	1
Total Purchases	0	10	12	3	-	5	26	24	-	-	80

Table 6.13: Number and Destination of Sold Goats

Number of goats

n = 537
no. of goat managers = 235

MALES	0	1	2	3	4	5	6-10	11-15	16-20	>20	Total
To whom sold											
Farmer - same village - % HH	95.7	1.8	1.0	0.6	0.4	-	0.4	-	-	-	
- no. of goats	0	9	10	9	8	-	16	-	-	-	52
Farmer - other village - % HH	99.4	0.6	-	-	-	-	-	-	-	-	
- no. of goats	0	1	-	-	-	-	-	-	-	-	1
South Africa - % of HH	100	-	-	-	-	-	-	-	-	-	
- no. of goats	0	-	-	-	-	-	-	-	-	-	-
Butcher - % of HH	100	-	-	-	-	-	-	-	-	-	
- no. of goats	0	-	-	-	-	-	-	-	-	-	-
Other - % of HH	100	-	-	-	-	-	-	-	-	-	
- no. of goats	0	-	-	-	-	-	-	-	-	-	-
Total Sales	0	10	10	9	8	-	16	-	-	-	53

Table 6.14: Number and Destination of Sold Goats

Number of goats

n = 537
no. of goat managers = 235

	0	1	2	3	4	5	6-10	11-15	16-20	>20	Total
FEMALES											
To whom sold											
Farmer - same village - % HH	98.0	1.0	0.2	0.2	0.4	0.2	0.2	-	-	-	
- no. of goats	0	5	3	4	10	10	10	-	-	-	42
Farmer - other village - % HH	99.2	0.2	0.2	0.2	-	0.2	-	-	-	-	
- no. of goats	0	1	2	3	-	5	-	-	-	-	11
South Africa - % of HH	99.8	0.2	-	-	-	-	-	-	-	-	
- no. of goats	0	1	-	-	-	-	-	-	-	-	1
Butcher - % of HH	100	-	-	-	-	-	-	-	-	-	
- no. of goats	0	-	-	-	-	-	-	-	-	-	-
Other - % of HH	100	-	-	-	-	-	-	-	-	-	
- no. of goats	0	-	-	-	-	-	-	-	-	-	-
Total Sales	0	7	5	7	10	15	10	-	-	-	54

Table 6.15: Number and Destination of Sold Goats

% of households and number of goats

n = 537
no. of goat managers = 235

SEX UNKNOWN	0	1	2	3	4	5	6-10	11-15	16-20	>20	Total
To whom sold											
Farmer - same village - % HH	93.9	2.0	-	-	-	-	-	-	2.0	4.0	
- no. of goats	0	1	-	-	-	-	-	-	17	57	75
Farmer - other village - % HH	100	-	-	-	-	-	-	-	-	-	
- no. of goats	0	-	-	-	-	-	-	-	-	-	-
South Africa - % of HH	100	-	-	-	-	-	-	-	-	-	
- no. of goats	0	-	-	-	-	-	-	-	-	-	-
Butcher - % of HH	100	-	-	-	-	-	-	-	-	-	
- no. of goats	0	-	-	-	-	-	-	-	-	-	-
Other - % of HH	98.0	2.0	-	-	-	-	-	-	-	-	
- no. of goats	0	1	-	-	-	-	-	-	-	-	1
Total	0	2	-	-	-	-	-	-	17	57	76

Table 6.16: Number and Source of Purchased Horses

Number of horses

n = 537
no. of horse managers = 273

From whom purchased	0	1	2	3	Total
Farmer - same village - % of HH	97.4	2.2	0.4	-	
- no. of horses	0	12	4	-	16
Farmer - other village - % HH	96.8	2.8	0.4	-	
- no. of horses	0	15	4	-	19
South Africa - % of HH	99.6	0.4	-	-	
- no. of horses	0	2	-	-	2
NOA - % of HH	100	-	-	-	-
- no. of horses	-	-	-	-	-
Feedlot - % of HH	100	-	-	-	-
- no. of horses	-	-	-	-	-
Auction - % of HH	100	-	-	-	
- no. of horses	0	-	-	-	-
Other - % of HH	100	-	-	-	
- no. of horses	0	-	-	-	-
Total	0	29	8	-	37

Table 6.17: Number and Destination of Sold Horses

Number of horses

n = 537
no. of horse managers = 273

To whom sold	0	1	2	3	Total
Farmer - same village - % of HH	98.5	1.5	0.2	-	
- no. of horses	0	8	2	-	10
Farmer - other village - % of HH	99.1	0.9	-	-	
- no. of horses	0	5	-	-	5
South Africa - % of HH	100	-	-	-	
- no. of horses	0	-	-	-	-
Butcher - % of HH	100	-	-	-	
- no. of horses	0	-	-	-	-
Other - % of HH	100	-	-	-	
- no. of horses	0	-	-	-	-
Total	0	13	2	-	15

Table 6.18: Number and Source of Purchased Donkeys

Number of donkeys

n = 537
no. of horse managers = 250

From whom purchased	0	1	2	>2	Total
Farmer - same village - % HH	98.1	1.7	0.2	-	
- no. of donkeys	0	9	2	-	11
Farmer - other village - % HH	98.1	1.9	-	-	
- no. of donkeys	0	10	-	-	10
South Africa - % of HH	99.8	-	-	0.2	
- no. of donkeys	0	-	-	20	20
Auction - % of HH	99.8	-	-	-	
- no. of donkeys	0	-	-	-	
Other - % of HH	99.6	-	0.2	0.2	
- no. of donkeys	0	-	2	3	5
Total	0	19	4	23	46

Table 6.19: Number and Destination of Sold Donkeys

Number of donkeys

n = 537
no. of donkey managers = 250

To whom sold	0	1	2	>2	Total
Farmer - same village - % HH	98.7	1.1	0.2	-	-
- no. of donkeys	0	6	2	-	8
Farmer - other village - % HH	100	-	-	-	-
- no. of donkeys	0	-	-	-	-
South Africa - % of HH	100	-	-	-	-
- no. of donkeys	0	-	-	-	-
Butcher - % of HH	99.8	-	-	-	-
- no. of donkeys	0	-	-	-	-
Other - % of HH	100	-	-	-	-
- no. of donkeys	0	-	-	-	-
Total	0	6	2	-	8

7. LIVESTOCK SLAUGHTER

In this section another component of the addition-subtraction tables of section 5 -- livestock slaughter -- is examined in detail. Intentional slaughter of animals is one of two ways in which the stock products of the livestock enterprises are reaped, that is the animals' meat, offal and hides or skins. Natural death also makes those products available. Here animals which are slaughtered intentionally will be described as 'slaughtered animals', and animals which die from natural causes will be described as 'fallen animals'. In Lesotho both slaughtered and fallen animals are 'butchered', that is, their carcasses are cut up and the cuts utilizied. In this section slaughtered animals are considered; in the following section fallen animals are analyzed.

In tables 7.1 to 7.19 the slaughter of cattle, sheep and goats, and the utilization of the products from the slaughtered animals are examined. During the survey respondants were also asked about household slaughter of horses and donkeys, but none were reported. From information contained in the next section it is apparent that horse and donkey meat products are also utilizied, but only from fallen animals. Questions were asked about the sex, age and condition of slaughtered animals, why they were slaughtered, and how the products were utilizied.

CATTLE SLAUGHTER

In table 7.1 the number of cattle slaughtered by sex is reported. Cattle are divided into females, oxen and bulls. The total cattle slaughter is relatively low; 92.5 percent of the households slaughtered no females, 92.9 slaughtered no oxen, and 99.4 percent slaughtered no bulls. Of those households which reported cattle slaughter, most slaughtered only one animal; 33 households slaughtered one cow, 29 slaughtered one oxen, and 3 slaughtered one bull. Four households slaughtered two cows, four households slaughtered two oxen, while two households slaughtered three oxen. No household slaughtered more than one bull. The total number of animals slaughtered was 87, 41 of which were cows, 43 of which were oxen, and 3 of which were bulls.

Of the 87 cattle slaughtered, the respondants knew the ages of 54 of the animals, and those ages are reported in table 7.3. Eleven of the 54 animals were less than 5 years old, 17 aged between 5 and 7 years, 24 aged between 8 and 10 years, and only two of the animals were older than 10 years (table 7.2). Of the 87 cattle slaughtered, 77 were owned and then slaughtered, 10 were purchased for slaughter (table 7.3).

Table 7.4 reports information gathered in response to a question asked about the condition of the cattle which were slaughtered. The information indicates that most of the animals that were slaughtered were deliberately fattened for slaughter, were chosen for slaughter because of their good condition, or were slaughtered at a time during the year when they were in relatively good condition. Of 85 animals which were rated, 34 were rated as being in excellent condition at the time of slaughter, 39 were in good condition, 8 were in fair condition, 2 were in poor condition, 1 was dying

of disease, and 1 was dying of starvation.

For each animal slaughtered, two questions were asked regarding why the animal was slaughtered. The first question related to the reason why the household chose to slaughter any bovine at that particular time. The second question asked why that particular animal was chosen for slaughter. The responses are summarized in tables 7.5 and 7.6. Of 96 responses to the question of why was any animal slaughtered, only 21 were for home consumption, one was for sale of products, and 4 were for other reasons. The majority of the cattle were slaughtered in connection with some ceremony. The most important ceremony was funerals (39), followed by balimo -- a form of offering to the ancestoral gods (13), weddings (9), baby welcomings (5), and initiation ceremonies (4). Particular types of animals may be preferred for certain ceremonies. For example, interviews with traditional doctors reveals that black oxen are preferred for initiation ceremonies (Shoup, personal communication, 26/03/87).

A variety of reasons were given for the selection of particular animals for slaughter (table 7.6). The most common reasons were old age (27), the best available animal (24), and fattened for slaughter (10). Other reasons given were that the animal was male (4), was infertile (2), was dying of disease (2), and was culled for its poor condition (1). Other reasons were reported for another 20 animals.

Comparison of the data reported in tables 7.3, 7.4, 7.5 and 7.6 allows some generalizations to be drawn about trends in cattle slaughter. It is evident that most cattle are slaughtered in connection with some ceremony, and the products of those slaughtered cattle consumed by members of the households, relatives and neighbours. The low level of slaughter for home consumption is likely partially explained by the lack of refrigeration or other types of home preservation -- few households would be able to consume all the products of a slaughtered bovine. People generally choose animals which are in relatively good condition, but prefer to slaughter those which are older and thus are at higher risk of dying, and are also of relatively low value for their production of flow products. Certain ceremonies demand particular types of animals to be slaughtered.

SHEEP SLAUGHTER

Compared to cattle slaughter, many more households reported slaughter of sheep and many more sheep were slaughtered. The sheep slaughter data reported on table 7.7 indicate that 11.6 percent of the households reported slaughtering at least one female sheep, 22.9 percent reported slaughtering at least one male sheep, while 3.3 percent reported slaughtering at least one sheep of unknown sex. Of a total of 578 sheep slaughtered, the large majority were male (69.0 percent), while only 22.8 percent were female. The respondants did not indicate the sex of 8.1 percent. Most of the households which slaughtered only slaughtered one female (50.9 percent) or one male (38.6 percent). Only 6.8 percent of all of households reported 67.9 percent of the total slaughter of male sheep. 88.2 percent of the sheep slaughtered were owned, 11.8 percent were purchased for slaughter (table 7.8).

The respondants indicated in table 7.9 that most of the sheep chosen for slaughter were in good condition. Of a total of 588 responses, 26.2 percent of the sheep were reported to be in excellent condition, 60.7 percent in good condition, 11.1 percent in fair condition, and only 2.0 percent in either poor or emaciated condition. None of the animals were said to be dying of disease or starvation.

Compared to cattle, a relatively high percentage of the sheep slaughtered were consumed by the households owning the sheep. It is reported in table 7.10 that nearly two-thirds (64.9 percent) of the sheep were slaughtered for home consumption. None were slaughtered for the sale of the products, and 7.0 were slaughtered for other reasons. Ceremonial reasons were given to explain the slaughter of 28.1 percent of the sheep. The relative importance of the ceremonies was very similar to cattle slaughter for ceremonies. The most important ceremony was funerals (9.8 percent), followed by baby welcoming celebrations (7.2 percent), balimo ceremonies (6.2 percent), initiation ceremonies (2.6 percent), and weddings (2.3 percent).

The reasons given for the choice of particular sheep for slaughter reported in table 7.11 indicate that a majority of sheep were chosen because they were in good condition and thus were expected to yield good quantities of meat and offal for consumption. The most popular reason given was that the animal was the best available (36.3 percent), and the second most popular reason was that the animal was fattened for slaughter (21.8 percent). Other reasons given were old age (15.9 percent), male (4.2 percent), infertile (2.7 percent), culled for poor condition (1.6 percent), colour of wool (1.6 percent), and dying of disease (0.4 percent). 15.4 percent of the sheep were chosen for other reasons.

The following conclusions can be drawn from these data on sheep slaughter: (1) many of the households which own sheep do slaughter them; (2) a relatively small percentage of all sheep-managing households slaughter a large percentage of the sheep; (3) the majority of the sheep slaughtered are male; (4) most of the sheep slaughtered are consumed by the household, with a minority slaughtered in connection with some ceremony; and (5) households generally choose to slaughter those sheep which are in good condition, but prefer to slaughter older males.

GOAT SLAUGHTER

Information on the slaughter of goats is presented in tables 7.12 to 7.16. From table 7.12 it is apparent that fewer households slaughter goats than sheep. 10.1 percent of the households reported slaughter of one or more female goat, 13.6 percent of the households reported slaughter of one or more male goat, and 1.3 percent of the households reported slaughter of one or more goat of unknown sex. Of a total of 257 goats which were slaughtered, over two-thirds (68.1 percent) were male. 95.8 percent of the slaughtered goats were owned and 4.2 percent were purchased for slaughter (table 7.13).

The goats which were slaughtered were generally rated by their owners to have been in good or excellent condition at the time of slaughter. Table 7.14 reports 227 ratings of the conditions of slaughtered goats: 33.0

percent were rated to have been in excellent condition, 53.7 percent were rated to have been in good condition, 9.7 percent in fair condition, and 3.0 percent in poor condition. One goat was reported to have been dying of disease.

Data on table 7.15 indicate that very few of the goats were slaughtered for ceremonies. Of 257 responses, 67.3 percent indicated that the goats were slaughtered for home consumption, compared to 8.9 percent for balimo, 5.4 percent for initiation ceremonies, 4.3 percent for funerals, 3.1 percent for welcoming babies, and 1.2 percent for weddings. Only one animal was slaughtered for the sale of its products. 9.3 percent of the animals were slaughtered for other reasons.

The reasons given for the choice of particular goats for slaughter are very similar to the reasons for sheep slaughter, with 'old age' more important for goats than for sheep. The most popular reason given was 'best available' (27.8 percent), followed by 'old age' (24.9 percent), 'fattened for slaughter' (14.7 percent), 'infertile' (4.9 percent), 'dying of disease' (2.9 percent), 'male' (1.6 percent), 'poor condition' (1.2 percent) and 'colour of mohair' (0.4 percent). A variety of other reasons were given for the choice of 21.6 percent of the goats (table 7.16).

From the goat slaughter data it appears that relative to sheep, fewer households slaughtered goats, and far fewer goats were slaughtered. Most of the goats slaughtered were males, mostly older males which were in relatively good condition. The ceremonial demand for goats is relatively low, with the result that most of the goats were slaughtered for home consumption.

UTILIZATION OF PRODUCTS FROM SLAUGHTERED ANIMALS

Virtually all of the usable meat and offal from cattle, sheep and goats slaughtered in Lesotho is consumed no matter what the occasion is that prompted the slaughter. Meat and offal from animals slaughtered for home consumption are primarily consumed by household members, with some often given away to relatives or neighbours. Offal was sold from none of the animals slaughtered, and meat sold from only 4 of the cattle and 1 of the sheep (table 7.17).

Most of the hides and skins from slaughtered animals are also utilizied in some manner, though the type of curing used often reduces much of the potential value of the hides and skins. The data on table 7.18 indicates that sun drying is the most common curing practice for hides and skins with 74.7 percent of the available cattle hides, 80.4 percent of the sheep skins, and 60.2 percent of the goat skins cured this way. Shade drying is rarely used for cattle hides or sheep skins, but more common for goat skins (19.7 percent of available goat skins are shade-dried). The recommended curing for all hides and skins -- dry or wet salting -- was practiced on only 19.7 percent of the cattle hides, 15.6 percent of the sheep skins, and 17.0 percent of the goat skins. Only a few hides and skins were reported to have received no curing at all.

While only a small proportion of the hides and skins from slaughtered animals were sold, most were put to some purpose within the household. The

data in table 7.19 indicate that very few of the available hides and skins were sold through the government-sponsored marketing channel of LPMS; only 6 sheep skins, no hides and no goat skins were sold through this channel. Private traders were a more important marketing channel, 14.8 percent of the sheep skins, 2.2 percent of the cattle hides, and 13.3 percent of goat skins were sold to private traders. The most common use of the hides and skins from all species was for bedding. 44.4 percent of the cattle hides, 68.1 percent of the sheep skins, and 72.3 percent of the goat skins were used for this purpose. The next most common use of the hides and skins was for clothing, 34.4 percent of cattle hides, 5.6 percent of sheep skins, and 6.6 percent of goat skins. Small numbers of the hides and skins were used for other purposes -- for example cattle hides are often used for making harnesses and rope -- and were thrown away.

Table 7.1: Cattle Slaughtered by Sex

n = 536
no. of cattle managers = 462

Number	Female Cattle		Oxen		Bulls		Total
	% households reporting	total slaughtered	% households reporting	total slaughtered	% households reporting	total slaughtered	total slaughtered
0	92.5	0	92.9	0	99.4	0	0
1	6.7	33	5.9	29	.6	3	65
2	.8	8	.8	8	-	-	16
3	-	-	.4	6	-	-	6
Total	100.0	41	100.0	43	100.0	3	87

Table 7.2: Cattle Slaughtered by Age

n = 536
no. of cattle managers = 462

No. of cattle slaughtered	AGE 0-4 yrs		5-7 yrs		8-10 yrs		11-13 yrs		>13 yrs	
	No. of households	No. of cattle	No. of households	No. of cattle	No. of households	No. of cattle	No. of households	No. of cattle	No. of households	No. of cattle
0	480	0	474	0	467	0	489		489	0
1	9	9	15	15	22	22	1	1	1	1
2	1	2	1	2	1	2	-	-	-	-
Total cattle		11		17		24		1		1

Under (over) counting = 33

Table 7.3: Cattle Slaughtered by Ownership

n = 536

no. of cattle managers = 462

	Number Owned	Number Purchased	Total	Under (over) counting
Female Cattle	40	4	44	(3)
Oxen	34	5	39	4
Bulls	3	1	4	(1)
Total	77	10	87	0

Table 7.4: Cattle Slaughtered - by Condition

n = 536

no. of cattle managers = 462

	Number of cattle slaughtered			
	Female Cattle	Oxen	Bulls	Total
Excellent	13	21	0	34
Good	20	17	2	39
Fair	3	3	2	8
Poor	2	0	0	2
Emaciated	0	0	0	0
Dying of disease	1	0	0	1
Dying of starvation	1	0	0	1
Total cattle	40	41	4	85
Under (over) counting	1	2	(1)	2

Table 7.5: General Reasons Why Cattle were Slaughtered

n = 536

no. of cattle managers = 462

	No. of cattle slaughtered	% of cattle slaughtered
Home consumption	21	21.9
Funeral	39	40.6
Welcome baby	5	5.2
Initiation ceremony	4	4.2
Wedding	9	9.4
Sale of products	1	1.0
Balimo	13	13.5
Other	4	4.2
Total	96	100.0
Under (over) counting	(9)	

Table 7.6: Reasons Why Particular Cattle were Slaughtered

n = 536
no. of cattle managers = 462

	No. of cattle slaughtered	% of cattle slaughtered
Fattened for slaughter	10	11.1
Best avaiable	24	26.7
Infertile	2	2.2
Culled - poor condition	1	1.1
Dying of old age	27	30.0
Dying from disease	2	2.2
Male	4	4.4
Other reason	20	22.2
Total	90	99.9
Under (over) counting	(3)	

Table 7.7:

	Female Sheep		
	% households reporting	Total slaughtered	%
0	88.3	0	
1	5.9	28	
2	2.3	22	
3	1.0	15	
4	1.0	20	
5	.6	15	
6-10	.8	32	
11-15	-	-	
16-20	-	-	
> 20	-	-	
Total	99.9	132	

Sheep Slaughtered by Sex

n = 536

no. of sheep managers = 250

Male Sheep		Sex Unknown	
% households reporting	Total slaughtered	% households reporting	Total slaughtered
77.2	0	96.4	
8.8	42	.7	2
4.0	38	.7	4
3.3	48		
1.3	24	.7	8
1.7	40	.3	5
2.1	75	.6	13
1.3	82	.3	15
0.2	20		
0.2	30	-	-
100.1	399	99.7	47

Table 7.8: Sheep Slaughtered by Ownership

n = 536
no. of sheep managers = 250

	Number Owned	Number Purchased	Total	Under (over) Counting
Female Sheep	127	14	141	(9)
Male Sheep	364	25	389	10
Sex Unknown	24	30	54	(7)
Total	515	69	584	(6)

Table 7.9: Sheep Slaughtered - by Condition

n = 536
no. of sheep managers = 250

	Number of sheep			
	Female Sheep	Male Sheep	Sex Unknown	Total
Excellent	58	94	2	154
Good	46	260	51	357
Fair	24	41	0	65
Poor	6	4	0	10
Ematiated	1	1	0	2
Dying of disease	0	0	0	0
Dying of starvation	0	0	0	0
Total	135	400	53	588
Under (over) counting	(3)	(1)	(6)	(10)

Table 7.10: General Reasons Why Sheep Were Slaughtered

n = 536
no. of sheep managers = 250

	No. of sheep slaughtered	% of sheep slaughtered
Home Consumption	369	64.9
Funeral	56	9.8
Welcome Baby	41	7.2
Initiation Ceremony	15	2.6
Wedding	13	2.3
Sale of products	0	0
Balimo	35	6.2
Other	40	7.0
Total	569	100.0
Under (over) counting	9	

Table 7.11: Reasons why Particular Sheep were Slaughtered

n = 536
no. of sheep managers = 250

	No. of sheep slaughtered	% of sheep slaughtered
Fattened for slaughter	119	21.8
Best avaiable	198	36.3
Infertile	15	2.7
Culled - poor condition	9	1.6
Dying of old age	87	15.9
Dying from disease	2	0.4
Its a Male	23	4.2
Color of Wool	9	1.6
Other reason	84	15.4
Total	546	99.9
Under (over) counting	32	

Table 7.12: Goats Slaughtered by Sex

n = 536
no. of goat managers = 235

	Female Goats		Male Goats		Sex Unknown	
	% households reporting	Total slaughtered	% households reporting	Total slaughtered	% households reporting	Total slaughtered
0	89.9	0	85.9	-	98.6	-
1	7.0	34	7.0	34	1.0	3
2	2.3	22	1.6	16	0	0
3	0.2	3	2.0	30	0	0
4	0.2	4	1.8	36	0	0
5	0.2	5	0.4	10	.3	5
6-10	0.2	6	0.4	17	-	-
11-15	-	-	0.2	12	-	-
16-20	-	-	0.2	20		
Total	100.0	74	99.5	175	99.9	8

Table 7.13: Goats Slaughtered by Ownership

n = 536
no. of goat managers = 235

	Number Owned	Number Purchased	Total	Under (over) counting
Female Goats	62	1	63	11
Male Goats	158	8	164	11
Sex Unknown	8	1	9	(1)
Total	228	10	238	21

Table 7.14: Goats Slaughtered - by Condition

n = 536
no. of goat managers = 250

	Number of Goats Slaughtered			
	Female Goat	Male Goat	Sex Unknown	Total
Excellent	17	57	1	75
Good	36	78	8	122
Fair	3	19	0	22
Poor	7	0	0	7
Ematiated	-	-	-	-
Dying of disease	1	0	0	1
Total	64	154	9	227
Under (over) counting	10	21	(1)	30

Table 7.15: General Reasons Why Goats Were Slaughtered

n = 536
no. of goat managers = 235

	No. of goats slaughtered	% of goats slaughtered
Home Consumption	173	67.3
Funeral	11	4.3
Welcome Baby	8	3.1
Initiation Ceremony	14	5.4
Wedding	3	1.1
Sale of products	1	0.4
Balimo	23	8.9
Other	24	9.3
Total	257	99.8
Under (over) counting	0	

Table 7.16: Reasons why particular goats were slaughtered

n = 536
no. of goat managers = 235

	No. of goats slaughtered	% of goats slaughtered
Fattened for slaughter	36	14.7
Best avaiable	68	27.8
Infertile	12	4.9
Poor condition	3	1.2
Dying of old age	61	24.9
Dying from disease	7	2.9
Its a Male	4	1.6
Colour of mohair	1	0.4
Other reason	53	21.6
Total	245	100.0
Under (over) counting	12	

Table 7.17: Sale of Products from Slaughtered Animals

n = 536

	No. of HH	
	Yes	No
Was meat sold from cattle slaughtered	4	532
Was offals sold from cattle slaughtered	-	536
Was meat sold from sheep slaughtered	1	535
Was offals sold from sheep slaughtered	-	536
Was meat sold from goats slaughtered	-	536
Was offals sold from goats slaughtered	-	536

Table 7.18: Curing of Hides and Skins from Slaughtered Animals*

n = 536

	Number of hides and skins		
	Cattle	Sheep	Goats
Sun-dried	74	427	188
Shade-dried	1	1	60
Dry-salted / wet-salted	17	83	52
Not cured	7	20	5
Total	99	531	305
Under (over) counting	(12)	47	(48)

* No horses or donkeys were reported to have been slaughtered.

Table 7.19: Disposal of Hides and Skins from Slaughtered Animals

n = 536

	Number of hides and skins		
	Cattle	Sheep	Goats
Sold to LPMS	-	6	-
Sold to Private Traders	2	72	34
Kept for clothing	31	27	17
Kept for bedding	40	336	185
Kept fro other purposes	17	45	19
Sold at Village	-	-	1
Total	90	486	256
Under (over) counting	(3)	92	1

8. FALLEN LIVESTOCK

One of the principal objectives of the survey was to evaluate the utilization of the products from fallen animals -- animals which die of natural causes. National statistics indicate very high levels of animal deaths and ancedotal evidence indicate that many of the products are utilizied. Quantification of this utilization is important for establishing accurate measures of offtake and for economic evaluations of the products produced by the livestock populations. Respondants were asked to provide details on the sex, age, location of death, reason for death, and disposition of products for each animal reported to have died during the year.

FALLEN CATTLE

Table 8.1 reports cattle deaths by sex and table 8.2 categorized those deaths by age. Of a total of 196 cattle which died, 59.2 percent were cows, 31.1 percent were oxen, 1.5 percent were bulls, and 8.2 percent were of unknown sex. The respondants could not estimate the age of 44.3 percent of the fallen cattle, but for those whose age was estimated the majority were less than 8 years old. 49.6 percent of the cattle died at less than 5 years, 37.6 percent were between 5 and 7 years, 10.3 percent were between 8 and 10 years, and only 2.6 percent were reported to have been greater than 10 years (table 8.2). These reported ages of death are likely somewhat misleading as many of the older animals are likely reported under 'age unknown'.

Respondants were asked to indicate the month of the year when the cattle died. The data summarized in table 8.3 indicate that the heaviest death losses are incurred during the late winter months -- August (22.1 percent), September (18.8 percent), and October (8.1 percent), while the lowest death losses are experienced in the spring and early summer months-- November (4.0 percent), December (6.0 percent) and January (2.0 percent). This pattern is explained by a combination of weather and nutritional stress. Very low average rainfall throughout the winter results in the grazing areas being in their worst condition by the late winter. Low levels of supplemental feeding combine with low levels of nutrient intake from grazing so that most animals consume less than their maintenance requirements. This nutritional stress leaves the animals very susceptable to malnutrition, wet, and cold, and lowers their resistance to disease. By October the range starts to produce new yearly growth of forage and remains in relatively good condition throughout the spring and early summer.

Respondants were asked to report where their cattle died -- in the village area, in the summer grazing area (cattle post), or en route to or from the summer grazing area. The data, summarized on table 8.4, indicate that 83.6 percent of all cattle deaths occurred in the village area. This is consistent with the above data on the month of cattle deaths. Cattle are normally kept in the village areas during the winter months.

Reasons respondants gave for their cattle deaths are reported in table 8.5. It is important to note that 23.5 percent of the responses were 'unknown causes' and 22.5 percent were 'other causes', indicating that the respondants often were unaware of the actual causes of death. Apart from

those responses, the most common answers were related to natural events--'injury' (15.0 percent), 'drowning' (2.5 percent) and 'lightning' (2.0 percent) -- and nutrition -- 'starvation' (17.5 percent), drought (3.5percent), and 'weather' (2.0 percent). A variety of diseases including bluetongue, anthrax, bloat, dystocia, rabies and blackleg were blamed for ten percent of all deaths.

The households were asked questions about the utilization of the products from fallen cattle, the main products being meat, offal and hides. This information is presented in tables 8.6, 8.7 and 8.8. Very little meat or offal from fallen animals goes to waste in Lesotho. The data contained in table 8.6 indicate that meat from 60.4 percent of the fallen cattle was consumed by members of the household, 25.9 percent was consumed by relatives and friends, 5.1 percent was sold in the village area, and 1.5 percent was consumed by shepherds for a total utilization of 92.9 percent. Meat from only 6.6 percent of the fallen cattle was discarded, fed to dogs, or eaten by vultures. A larger percentage of the offal from fallen animals was discarded, but still the majority (87.1 percent) was consumed.

Table 8.8 reports information on the curing of hides from fallen cattle, and table 8.9 reports information on the disposal of those hides. Sun-drying was the most popular type of curing (76.7 percent of available hides were sun-dried), followed by dry salting (11.9 percent), and shade drying (3.6 percent). Ten percent of the hides were not cured. There appears to be a relatively high local village demand for the hides of fallen cattle. Of total marketings of 18 hides, 13 were sold in the local village area, 1 was sold through LPMS, and 4 were sold to private traders. The largest household uses of the hides was for bedding (76 hides), other uses -- including making harness and strapping (74 hides) -- and clothing (15 hides).

FALLEN SHEEP

Table 8.10 reports sheep deaths by sex. Of the total of 284 sheep for which the sex was known, 67.6 percent were female and 32.4 percent male. The data on table 8.11 illustrate a different seasonal pattern of deaths of sheep than was illustrated for cattle. The four months of greatest reported sheep deaths were the late summer and early autumn months of January (12.4 percent), February (18.6 percent), March (12.4 percent), and April (14.1 percent); least sheep deaths were reported in the seven months of June through December when a total of 21.5 percent of the deaths were reported. The data on location of sheep deaths confirms this seasonal pattern. Of a total of 340 reported deaths, 226 occurred in the summer grazing area and 114 occurred in the village area (table 8.12).

The reported reasons for sheep deaths (table 8.13) provide some insight into the seasonal and locational patterns of sheep deaths. While few cattle died due to predators or disease -- both likely more prevalent in the cattle post areas -- these were among the most commonly cited reasons for sheep deaths. The most commonly stated reasons were: 'disease' (23.5 percent), 'weather' (20.5 percent), 'predators' (14.2 percent), 'starvation' (7.8 percent), and 'injury' (5.1 percent). A variety of specific diseases including bluetongue (2.7 percent), blackleg (2.4 percent), rabies, foot and mouth, and bloat (each 0.6 percent), and

dystocia (0.3 percent) added to the 'disease' deaths to total 30.7 percent of all deaths. Other causes of death included snake bite (1.8 percent), lightning (1.8 percent), old age (0.9 percent), and drought (0.3 percent).

The disposition of the meat and offal from fallen sheep is summarized in table 8.14 and 8.15. These data indicate higher wastage than was reported for fallen cattle, partially due to the different reasons for death. Meat from slightly over half of the fallen sheep was consumed by household members (54.6 percent), while 15.0 percent was consumed by relatives or friends, 16.6 percent consumed by shepherds, and 2.4 percent sold in the village area for a total utilization of 88.6 percent of the meat. The remaining 11.4 was consumed by vultures (9.2 percent), thrown away (1.8 percent), and fed to dogs (0.3 percent).

The pattern of disposition of offal was found to be very similar to the disposition of meat. Offal from 45.5 percent of the fallen sheep was consumed by household members, 12.7 percent was consumed by relatives or friends, 17.3 percent was consumed by shepherds, while 2.5 percent was sold in the village area. The wastage totalled 21.0 percent, 10.2 percent was fed to dogs, and 10.8 was thrown away (table 8.15).

The curing and disposition of skins from fallen sheep are reported in tables 8.16 and 8.17. Unfortunately the data on table 8.16 show only the curing of 226 skins while table 8.10 indicates that 329 were available. Examination of the previous data suggests that the sheep killed by predators and eaten by vultures were not accounted for in table 8.16. Therefore, the difference should likely be categorized under 'not cured', bringing that category to 128. Of 329 skins then, 128 were not cured, 116 were sun-dried, and 85 were dry- or wet-salted.

Very few of the skins from fallen sheep were sold. Of a total disposition of 373 skins (an over-counting), 2 were sold in the village, 6 were sold through LPMS, 6 were sold to private traders, and 7 were sold on town streets. Most of the skins were used in the household -- 163 were kept for bedding, 2 were kept for clothing, 16 were kept for other purposes -- or were waste -- 155 were thrown away and 16 were eaten by dogs.

FALLEN GOATS

Goat deaths were evenly divided between males and females (table 8.18), and were seasonally concentrated in the autumn months of April, May and June (table 8.19). Of a total of 282 reported deaths, 80 occurred in the village area, 180 in the summer grazing area, and 22 en route to or from the summer grazing area (table 8.20).

The reasons given for goat deaths were very similar to those given for sheep deaths. Disease appears to have been responsible for the largest share of the deaths. Of a total of 259 deaths for which reasons were stated, 79 died from unspecified diseases, 10 from anthrax, 7 from bloat, and 2 from bluetongue. Injury (41), predators (24), weather (23), drought (12), old age (6), drowning (5), and starvation (4) were other reasons given. 39 of the goats died from unknown causes (table 8.21).

Meat from approximately one third (32.7 percent) of the fallen goats

were consumed by household members. Relatives or friends consumed a further 16.6 percent, while 23.4 percent was consumed by shepherds, and 5.2 percent was sold in the village area. The remaining 12.1 percent was wasted (fed to dogs or thrown away (table 8.22). The consumption pattern for offal from fallen goats is very similar: 35.0 percent was consumed by household members, 16.9 percent was consumed by friends or relatives, 26.6 percent was consumed by shepherds, 5.8 percent was sold in the local village area, and 11.2 percent was wasted (table 8.23).

Table 8.24 reports the type of curing used for 201 of the 274 skins available. 149 of the skins were sun-dried, 28 were dry- or wet-salted, and 24 were not cured. 'Not cured' should be raised to 97 to account for the skins for which no account was given. Over one third (35.0 percent) of the goat skins were thrown away. The remainder were used for bedding (38.5 percent), sold in the village area (6.9 percent), or kept for other purposes (18.6 percent).

FALLEN HORSES AND DONKEYS

Twenty horses died during the year, 10 males and 10 females. The deaths were relatively evenly distributed throughout the year, with 5 dying in April. Two primary reasons for the deaths were nutrition (starvation and drought were responsible for 9 deaths) and disease (7 deaths). Most of the horses died in the village area (tables 8.26 to 9.29).

While no deliberate slaughter was reported for horses, Basotho do not appear to be adverse to eating the meat from their fallen horses. Table 8.30 reports that of 21 fallen horses, the meat of 13 was consumed by members of the household and 5 consumed by relatives or friends. The offal from half of the fallen horses was consumed by household members, relatives or friends. Two of the horse hides were dry-salted, 12 sun-dried, and 2 not cured. Twelve hides were thrown away, 8 were kept for bedding, and one was kept for other purposes.

Five female and three male donkeys died during the year. Severe weather took a toll, two donkeys died from lightning, and two from other severe weather. Diseases were responsible for two deaths, injuries one, and old age another (tables 8.33 and 8.36). Like horses, most of the donkeys died in the village area (table 8.35).

Basotho are also willing to consume the meat and offal from fallen donkeys. Of nine reported fallen donkeys, the meat and offal from 5 were consumed by household members, friends or relatives. Meat from the remaining three was discarded (table 8.37). Half of the donkeys hides were sun-dried and then used for bedding or other purposes, and half were thrown away (tables 8.38 and 8.39).

Table 8.1: Sex of Cattle Which Died

n = 536
no. of cattle managers = 462

% of households and number of cattle

	Cows		Oxen		Bulls		Sex unknown	
Number	% of HH	No. of cows	% of HH	No. of oxen	% of HH	No. of bulls	% of HH	No. of cattle
0	86.5	-	91.8	-	99.6	-	98.1	-
1	6.5	32	5.1	25	0.2	1	1.4	7
2	5.3	52	2.2	22	0.4	2	0.2	2
3	0.8	12	0.4	6	-	-	-	-
4	0.2	4	0.4	8	-	-	-	-
5	0.4	10	-	-	-	-	-	-
>5	0.2	6	-	-	-	-	0.2	7
Total	99.9	116	99.9	61	100.2	3	99.7	16

Table 8.2: Ages of Cattle Which Died

n = 536
no. of cattle managers = 462

% of households and number of cattle

	0	1	2	3	4	5	>5	Total
0-4 years - % of HH	91.6	6.5	1.4	0.2	-	-	0.2	
- no. of cattle	0	32	14	3	-	-	9	58
5-7 years - % of HH	94.1	3.7	1.2	0.6	-	0.2	-	
- no. of cattle	0	18	12	9	-	5	-	44
8-10 years - % of HH	98.0	1.6	0.4	-	-	-	-	
- no. of cattle	0	8	4	-	-	-	-	12
11-13 years - % of HH	99.6	0.4	-	-	-	-	-	
- no. of cattle	0	2	-	-	-	-	-	2
>13 years - % of HH	99.8	0.2	-	-	-	-	-	
- no. of cattle	0	1	-	-	-	-	-	1
Age unknown - % of HH	92.2	3.5	1.8	0.2	1.0	0.8	0.4	
- no. of cattle	0	17	18	3	20	20	15	93
Total no. of cattle	0	78	48	15	20	25	24	210
Under (over) counting								(14)

Table 8.3: Month of Cattle Deaths

n = 536
no. of cattle managers = 462

Month	% of households and number of cattle							
	0	1	2	3	4	5	>5	Total
January - % of HH	99.4	0.6	-	-	-	-	-	
- no. of cattle	0	3	-	-	-	-	-	3
February - % of HH	98.6	1.2	-	-	-	0.2	-	
- no. of cattle	0	6	-	-	-	5	-	11
March - % of HH	98.8	1.0	0.2	-	-	-	-	
- no. of cattle	0	5	2	-	-	-	-	7
April - % of HH	99.0	0.8	0.2	-	-	-	-	
- no. of cattle	0	4	2	-	-	-	-	6
May - % of HH	98.2	1.4	0.2	0.2	-	-	-	
- no. of cattle	0	7	2	3	-	-	-	12
June - % of HH	97.8	1.8	0.4	-	-	-	-	
- no. of cattle	0	9	4	-	-	-	-	13
July - % of HH	99.0	0.8	0.2	-	-	-	-	
- no. of cattle	0	4	5	-	-	-	-	9
August - % of HH	98.2	0.6	0.2	-	0.4	0.2	0.4	
- no. of cattle	0	3	2	-	8	5	15	33
September - % of HH	96.1	2.7	0.6	0.6	-	-	-	
- no. of cattle	0	13	6	9	-	-	-	28
October - % of HH	98.6	0.8	0.4	-	0.2	-	-	
- no. of cattle	0	4	4	-	4	-	-	12
November - % of HH	98.8	1.2	-	-	-	-	-	
- no. of cattle	0	6	-	-	-	-	-	6
December - % of HH	98.6	1.0	0.4	-	-	-	-	
- no. of cattle	0	5	4	-	-	-	-	9
Unknown month _ of HH	94.7	2.6	1.3	0.2	0.6	0.2	-	
- no. of cattle	0	14	14	3	12	5	-	48
Total Number of cattle	0	83	45	15	24	15	15	197
Under (over) counting								(1)

Table 8.4: Location of Cattle Deaths

n = 536
no. of cattle managers = 462

% of households and number of cattle

	0	1	2	3	4	5	>5	Total
Village area - % of HH	81.4	10.4	5.1	0.6	1.4	0.6	0.4	
- no. of cattle	0	51	50	9	28	15	15	168
Summer grazing area - % HH	95.9	2.2	1.2	0.6	-	-	-	
- no. of cattle	0	11	12	9	-	-	-	32
On trek to grazing area								
- % of HH	99.8	0.2	-	-	-	-	-	
- no. of cattle	0	1	-	-	-	-	-	1
Total number of cattle	0	63	62	18	28	15	15	201
Under (over) counting)								(5)

Table 8.5: Reasons reported for cattle deaths

n = 536
no. of cattle managers = 462

	% of households and number of cattle							
	0	1	2	3	4	5	>5	Total
Old Age - % of HH	99.6	0.2	0.2	-	-	-	-	
- no. of cattle	0	1	2	-	-	-	-	3
Starvation - % of HH	96.1	2.0	1.4	-	-	0.2	0.2	
- no. of cattle	0	10	14	-	-	5	6	35
Drought - % of HH	99.2	0.4	0.2	0.2	-	-	-	
- no. of cattle	0	2	2	3	-	-	-	7
Lightning - % of HH	99.2	0.8	-	-	-	-	-	
- no. of cattle	0	4	-	-	-	-	-	4
Disease unspecified - % of HH	99.8	0.2	-	-	-	-	-	
- no. of cattle	0	1	-	-	-	-	-	1
Bluetongue - % of HH	99.6	0.4	-	-	-	-	-	
- no. of cattle	0	2	-	-	-	-	-	2
Anthrax - % of HH	99.6	0.2	0.2	-	-	-	-	
- no. of cattle	0	1	2	-	-	-	-	3
Drowning - % of HH	99.2	0.6	0.2	-	-	-	-	
- no. of cattle	0	3	2	-	-	-	-	5
Bloat - % of HH	99.6	0.2	0.2	-	-	-	-	
- no. of cattle	0	1	2	-	-	-	-	3
Dystocia - % of HH	99.4	0.4	0.2	-	-	-	-	
- no. of cattle	0	2	2	-	-	-	-	4
Rabies - % of HH	99.8	0.2	-	-	-	-	-	
- no. of cattle	0	1	-	-	-	-	-	1
Blackleg - % of HH	99.2	0.4	0.4	-	-	-	-	
- no. of cattle	0	2	4	-	-	-	-	6
Injury - % of HH	93.9	5.3	0.4	-	-	-	-	
- no. of cattle	0	26	4	-	-	-	-	30
Predators - % of HH	100.0	-	-	-	-	-	-	
- no. of cattle	0	-	-	-	-	-	-	0
Weather - % of HH	99.8	0.2	-	-	-	-	-	
- no. of cattle	0	4	-	-	-	-	-	4
Unknown causes - % of HH	94.9	3.1	0.8	0.4	0.4	0.4	-	
- no. of cattle	0	15	8	6	8	10	-	47
Other - % of HH	94.7	3.3	1.2	0.4	-	-	0.2	
- no. of cattle	0	16	12	8	-	-	9	45
Total number of cattle	0	91	54	39	8	15	15	200

Table 8.6: Use of meat from fallen cattle

n = 536
no. of cattle managers = 462

% of households and number of cattle

Use of Meat	0	1	2	3	4	5	>5	Tot.
Consumed in household - % of HH	85.3	9.2	3.5	0.4	1.2	0.4	-	
- no. of cattle	0	45	34	6	24	10	-	11
Consumed by Relative/friend								
- % of HH	95.5	2.2	1.0	0.2	0.4	0.4	0.2	
- no. of cattle	0	11	10	3	8	10	9	51
Sold in village area - % of HH	98.4	1.2	0.4	-	-	-	-	
- no. of cattle	0	6	4	-	-	-	-	10
Consumed by Shepherds - % of HH	99.4	0.6	-	-	-	-	-	
- no. of cattle	0	3	-	-	-	-	-	3
Fed to dogs - % of HH	99.6	0.4	-	-	-	-	-	
- no. of cattle	0	4	-	-	-	-	-	4
Sold outside village - % of HH	99.8	0.2	-	-	-	-	-	
- no. of cattle	0	1	-	-	-	-	-	1
Thrown away - % of HH	99.8	0.2	-	-	-	-	-	
- no. of cattle	0	8	-	-	-	-	-	8
Eaten by vultures - % of HH	99.8	0.2	-	-	-	-	-	
- no. of cattle	0	1	-	-	-	-	-	1
Total number of cattle	0	79	48	9	32	20	9	197
Under (over) counting								(1

Table 8.7: Use of Offal from Fallen Cattle

n = 536
no. of cattle managers = 462

Use of offals	% of households and number of cattle							
	0	1	2	3	4	5	>5	Total
Consumed in household - % of HH	84.9	8.6	4.3	0.4	1.2	0.4	0.2	
- no. of cattle	0	42	42	6	24	10	6	130
Consumed by Relative/friend - % of HH	96.3	2.2	0.2	0.4	0.2	0.4	0.2	
- no. of cattle	0	11	2	6	4	10	9	42
Sold in village area - % of HH	96.6	0.4	-	-	-	-	-	
- no. of cattle	0	2	-	-	-	-	-	2
Consumed by Shepherds - % of HH	99.6	0.4	-	-	-	-	-	
- no. of cattle	0	2	-	-	-	-	-	2
Fed to dogs - % of HH	99.4	0.2	0.4	-	-	-	-	
- no. of cattle	0	1	4	-	-	-	-	5
Sold outside village - % of HH	100.0	-	-	-	-	-	-	
- no. of cattle	0	-	-	-	-	-	-	-
Thrown away - % of HH	97.8	0.8	1.2	-	0.2	-	-	
- no. of cattle	0	4	12	-	4	-	-	20
Eaten by vultures - % of HH	99.8	0.2	-	-	-	-	-	
- no. of cattle	0	1	-	-	-	-	-	1
Total number of cattle	0	63	60	12	32	20	15	202
Under (over) counting								(6)

Table 8.8: Curing of Hides from fallen cattle

n = 536
no. of cattle managers = 462

% of households and number of hides

	0	1	2	3	4	5	>5	Total
Sundried - % of HH	84.6	8.0	4.5	1.0	0.8	0.6	0.4	
- no. of hides	0	39	44	15	16	15	19	148
Air/shade dry - % of HH	99.4	0.4	-	-	-	0.2	-	
- no. of hides	0	2	-	-	-	5	-	7
Dry salted - % of HH	99.0	1.4	0.4	-	0.6	-	-	
- no. of hides	0	7	4	-	12	-	-	23
Not cured - % of HH	98.6	0.6	0.2	0.4	0.2	-	-	
- no. of hides	0	3	2	6	4	-	-	15
Total number of hides	0	51	50	21	32	20	19	193
Under (over) counting								3

Table 8.9: Disposition of hides from fallen cattle

n = 536
no. of cattle managers = 462

% of households reporting and number of hides

	0	1	2	3	4	5	>5	Total
Thrown away - % of HH	95.9	3.1	1.0	-	-	-	-	
- no. of hides	0	15	10	-	-	-	-	25
Sold in village - % of HH	99.6	-	-	0.2	-	-	0.2	
- no. of hides	0	-	-	3	-	-	10	23
Sold to LPMS - % of HH	99.8	0.2	-	-	-	-	-	
- no. of hides	0	1	-	-	-	-	-	1
Sold to private traders								
- % of HH	99.4	0.4	0.2	-	-	-	-	
- no. of hides	0	2	2	-	-	-	-	4
Sold on streets/roads								
- % of HH	-	-	-	-	-	-	-	
- no. of hides	-	-	-	-	-	-	-	0
Kept for clothing - % HH	98.4	0.6	0.8	-	0.2	-	-	
- no. of hides	0	3	8	-	4	-	-	15
Kept for bedding - % of HH	90.6	5.9	2.3	0.4	0.2	0.6	-	
- no. of hides	0	29	22	6	4	15	-	76
Kept for other reasons								
- % of HH	92.0	4.3	2.0	0.8	0.6	-	0.2	
- no. of hides	0	21	20	12	12	-	9	74
Total number of hides	0	71	62	21	20	15	19	208
Under (over) counting								(12)

Table 8.10: Sheep Deaths by Sex

n = 536

no. of sheep managers = 250

% of households and number of sheep

	0	1	2	3	4	5	6-10	11-15	16-20	>20	Total
Female - % of HH	89.6	3.1	2.3	1.7	0.4	-	1.8	0.6	0.2	-	
- no. of sheep	0	15	22	24	8	-	65	38	20	-	192
Male - % of HH	92.9	3.3	1.5	0.4	0.2	1.2	0.8	0.2	-	-	
- no. of sheep	0	16	14	6	4	5	32	15	-	-	92
Sex not specified											
- % of HH	97.3	1.0	-	0.3	0.7	-	-	0.3	0.3	-	
- no. of sheep	0	3	-	3	8	-	-	11	20	-	45
Total Sheep	0	34	36	33	20	5	97	64	20	56	329

Table 8.11: Sheep Deaths by Month

n = 536
no. of sheep managers = 250

	0	1	2	3	4	5	6-10	11-15	16-20	>20	Total
January - % of HH	99.0	-	0.3	-	-	-	0.7	-	-	-	
- no. of sheep	0	-	2	-	-	-	20	-	-	-	22
February - % of HH	98.6	0.3	-	-	-	0.3	0.3	-	0.3	-	
- no. of sheep	0	1	-	-	-	5	7	-	20	-	33
March - % of HH	96.6	1.7	1.0	0.3	-	-	0.3	-	-	-	
- no. of sheep	0	5	6	3	-	-	8	-	-	-	22
April - % of HH	97.6	1.0	0.3	-	0.3	0.3	-	0.3	-	-	
- no. of sheep	0	3	2	-	4	5	-	11	-	-	25
May - % of HH	97.0	1.4	1.0	0.3	-	-	0.3	-	-	-	
- no. of sheep	0	4	6	3	-	-	6	-	-	-	19
June - % of HH	98.6	0.7	-	-	0.7	-	-	-	-	-	
- no. of sheep	0	2	-	-	8	-	-	-	-	-	10
July - % of HH	99.3	0.3	-	-	0.3	-	-	-	-	-	
- no. of sheep	0	1	-	-	4	-	-	-	-	-	5
September - % of HH	98.6	0.3	0.7	0.3	-	-	-	-	-	-	
- no. of sheep	0	1	4	3	-	-	-	-	-	-	8
November - % of HH	99.3	0.3	0.3	-	-	-	-	-	-	-	
- no. of sheep	0	1	2	-	-	-	-	-	-	-	3
December - % of HH	98.0	1.0	0.7	-	-	0.3	-	-	-	-	
- no. of sheep	0	3	4	-	-	5	-	-	-	-	12
Month unknown - % of HH	90.8	1.4	1.0	0.4	1.0	0.4	4.4	-	0.2	0.4	
- no. of sheep	0	7	10	6	20	10	49	-	17	101	202
Total number of sheep	0	28	36	15	36	25	90	11	37	101	379
Under (over) counting											(50)

Table 8.12: Location of Sheep Deaths

n = 536
no. of sheep managers = 250

% of households and number of sheep

	0	1	2	3	4	5	6-10	11-15	16-20	>20	Total
Village Area - % of HH	86.5	6.1	2.0	1.0	2.4	1.0	0.6	-	0.3	-	
- no. of sheep	0	18	12	9	28	15	15	-	17	-	114
Summer grazing area - % HH	89.9	1.4	3.0	0.7	0.3	0.7	2.3	0.7	0.3	0.6	
- no. of sheep	0	4	12	9	28	15	31	11	20	96	226
Total number of sheep	0	22	24	18	56	30	46	11	37	96	340
Under (over) counting											(11)

Table 8.13: Reported Reasons for Sheep Deaths

n = 536

no.of sheep managers = 250

% of households and number of sheep

	0	1	2	3	4	5	6-10	11-15	16-20	>20	Total
Old age - % of HH	99.7	0	0	0.3	-	-	-	-	-	-	
- no. of sheep	0	-	-	3	-	-	-	-	-	-	3
Starvation - % of HH	98.0	1.0	0.3	0	0.3	0	0	0	0.3	-	
- no. of sheep	0	3	2	-	4	-	-	-	17	-	26
Drought - % of HH	99.7	0.3	-	-	-	-	-	-	-	-	
- no. of sheep	0	1	-	-	-	-	-	-	-	-	1
Lightning - % of HH	99.3	0	0.3	0	0.3	-	-	-	-	-	
- no. of sheep	0	-	2	-	4	-	-	-	-	-	6
Disease - % of HH	93.6	1.4	1.4	0.3	1.4	0.3	1.2	0.3	-	-	
- no. of sheep	0	4	8	3	16	5	31	11	-	-	78
Bluetongue - % of HH	99.3	0.3	0	0	0	0	0.3	-	-	-	
- no. of sheep	0	1	-	-	-	-	8	-	-	-	9
Drowning - % of HH	99.7	0	0	0	0	0.3	-	-	-	-	
- no. of sheep	0	-	-	-	-	5	-	-	-	-	5
Bloat - % of HH	99.3	0.7	-	-	-	-	-	-	-	-	
- no. of sheep	0	2	-	-	-	-	-	-	-	-	2
Dystocia - % of HH	99.7	0.3	-	-	-	-	-	-	-	-	
- no. of sheep	0	1	-	-	-	-	-	-	-	-	1
Foot & mouth - % of HH	99.7	0	0.3	-	-	-	-	-	-	-	
- no. of sheep	0	-	2	-	-	-	-	-	-	-	2
Rabies - % of HH	99.3	0.7	-	-	-	-	-	-	-	-	
- no. of sheep	0	2	-	-	-	-	-	-	-	-	2
Blackleg - % of HH	99.3	0	0	0	0	0	0.3	-	-	-	
- no. of sheep	0	-	-	-	-	-	8	-	-	-	8
Unknown causes - % of HH	93.6	3.0	1.4	0.3	0.7	0	0.9	-	-	-	
- no. of sheep	0	9	8	3	8	-	23	-	-	-	51
Injury - % of HH	97.0	2.4	0	0	0	0.7	-	-	-	-	
- no. of sheep	0	7	-	-	-	10	-	-	-	-	17
Predators - % of HH	98.0	0.3	0	0.3	0	0.3	0.3	0.3	0.3	-	
- no. of sheep	0	1	-	3	-	5	7	11	20	-	47
Weather - % of HH	98.6	0	0.3	0	0.3	0	0.3	0	0	0.3	
- no. of sheep	0	-	2	-	4	-	6	-	-	56	68
Snake bite - % of HH	98.6	1.1	0	0.4	-	-	-	-	-	-	
- no. of sheep	0	3	-	3	-	-	-	-	-	-	6
Total number of sheep	0	34	24	15	36	25	83	22	37	56	332
Under (over) counting											(3)

Table 8.14: Use of Meat from Fallen Sheep

n = 536
no. of sheep managers = 250

% of households and no. of sheep

Use of meat	0	1	2	3	4	5	6-10	11-15	16-20	>20	Total
Consumed in household - % HH	84.7	6.8	3.4	0.7	2.0	1.0	0.3	-	0.6	0.3	
- no. of sheep	0	20	20	6	24	15	11	-	37	45	178
Consumed by Relative/friend											
- % of HH	96.3	-	1.7	-	0.3	0.7	0.6	0.3	-	-	
- no. of sheep	0	-	10	-	4	10	14	11	-	-	49
Sold in village area - % HH	99.7	-	-	-	-	-	0.3	-	-	-	
- no. of sheep	0	-	-	-	-	-	8	-	-	-	8
Consumed by shepherds - % HH	96.3	-	0.7	1.4	0.3	-	1.3	-	-	-	
- no. of sheep	0	-	4	12	4	-	34	-	-	-	54
Fed to dogs - % of HH	99.7	0.3	-	-	-	-	-	-	-	-	
- no. of sheep	0	1	-	-	-	-	-	-	-	-	1
Thrown away - % of HH	99.0	0.7	-	-	0.3	-	-	-	-	-	
- no. of sheep	0	2	-	-	4	-	-	-	-	-	6
Eaten by vultures - % of HH	99.0	-	-	-	-	-	-	-	-	0.3	
- no. of sheep	0	-		-	-	-	-	-	-	-	30
Total number of sheep	0	23	34	18	36	25	67	11	37	75	326
Under (over) counting											3

Table 8.15: Use of Offal from Fallen Sheep

n = 536
no. of sheep managers = 250

% of households and number of sheep

Use of offals	0	1	2	3	4	5	6-10	11-15	16-20	>20	Total
Consumed in HH - % HH	87.4	5.1	3.4	-	2.0	1.0	-	0.3	0.3	0.3	
- no. of sheep	0	15	20	-	24	15	-	11	17	45	147
Consumed by Relative/friend - % of HH	97.3	0.3	0.3	-	0.3	0.7	0.6	0.3	-	-	
- no. of sheep	0	1	2	-	4	10	13	11	-	-	41
Sold in village area - % HH	99.7	-	-	-	-	-	0.3	-	-	-	
- no. of sheep	0	-	-	-	-	-	8	-	-	-	8
Consumed by shepherds - % HH	95.9	0.3	1.0	0.7	0.3	0.3	1.3	-	-	-	
- no. of sheep	0	1	6	6	4	5	34	-	-	-	56
Fed to dogs - % of HH	99.0	0.3	0.3	-	-	-	-	-	-	0.3	
- no. of sheep	0	1	2	-	-	-	-	-	-	30	33
Thrown away - % of HH	97.6	1.4	-	-	0.3	-	0.3	-	0.3	-	
- no. of sheep	0	4	-	-	4	-	7	-	20	-	35
Consumed when mafisad out - % of HH	98.8	0.6	0.6	-	-	-	-	-	-	-	
- no. of sheep	0	1	2	-	-	-	-	-	-	-	3
Total number of sheep	0	23	32	6	36	30	62	22	37	75	323
Under (over) counting											6

Table 8.16: Curing of Skins from fallen sheep

n = 536
no. of sheep managers = 250

% of households and number of skins

	0	1	2	3	4	5	6-10	11-15	16-20	>20	Total
Sundried - % of HH	87.1	3.7	4.1	0.3	2.4	0.7	1.3	0.3	-	-	
- no. of skins	0	11	24	3	28	10	29	11	-	-	116
Dry or wet salted - % of HH	96.6	1.3	-	-	0.3	1.0	0.6	-	-	0.3	
- no. of skins	0	4	-	-	4	15	17	-	-	45	85
Not cured - % of HH	98.3	0.3	0.3	0.3	-	-	0.3	0.3	-	-	
- no. of skins	0	1	2	3	-	-	8	11	-	-	25
Total number of skins	0	16	26	6	32	25	54	22	-	45	226
under (over) counting											103

Table 8.17: Use of skins from fallen sheep

n = 536
no. of sheep managers = 250

% of households and number of skins

	0	1	2	3	4	5	6-10	11-15	16-20	>20	Total
Thrown away - % of HH	92.2	3.0	0.3	0.7	1.0	0.3	1.0	0.7	0.3	0.3	
- no. of skins	0	9	2	6	12	5	23	22	20	56	155
Sold in village - % of HH	99.7	-	0.3	-	-	-	-	-	-	-	
- no. of skins	0	-	2	-	-	-	-	-	-	-	2
Sold to LPMS - % of HH	99.3	0.3	-	-	-	-	0.3	-	-	-	
- no. of skins	0	1	-	-	-	-	5	-	-	-	6
Sold to private traders - % HH		99.3	0.3	-	-	-	0.3	-	-	-	-
- no. of skins	0	1	-	-	-	5	-	-	-	-	6
Sold on streets - % of HH	99.7	-	-	-	-	-	0.3	-	-	-	
- no. of skins	0	-	-	-	-	-	7	-	-	-	7
Kept for clothing - % of HH	99.3	0.7	-	-	-	-	-	-	-	-	
- no. of skins	0	2	-	-	-	-	-	-	-	-	2
Kept for bedding - % of HH	88.5	3.0	3.7	0.7	1.4	0.7	1.3	-	0.3	0.3	
- no. of skins	0	9	22	6	16	20	28	-	17	45	163
Kept for other reasons - % HH		99.0	0.3	-	-	-	0.3	0.3	-	-	-
- no. of skins	0	1	-	-	-	5	10	-	-	-	16
Eaten by dogs - % of HH	97.5	-	1.5	-	0.5	-	0.5	-	-	-	
- no. of skins	0	-	6	-	4	-	6	-	-	-	16
Total number of skins	0	23	32	12	32	35	79	22	37	101	373
under (over) counting											44

Table 8.18: Goat Deaths by Sex

n = 536
no. of goat managers = 235

% of households and number of goats

	0	1	2	3	4	5	6-10	11-15	16-20	>20	Total
Female - % of HH	88.9	4.2	4.2	0.3	0.3	-	1.6	0.3	-	-	
- no. of goats	0	12	24	3	4	-	39	15	-	-	97
Male - % of HH	88.9	2.8	2.8	2.1	1.0	0.7	-	0.3	0.3	-	
- no. of goats	0	8	16	18	12	10	-	14	20	-	98
Sex unknown - % of HH	96.9	0.7	-	1.0	-	-	0.6	-	-	0.6	
- no. of goats	0	2	-	9	-	-	15	-	-	53	79
Total goat deaths	0	22	40	30	16	10	54	29	20	53	274

Table 8.19: Goat Deaths, by Month

n = 536
no. of goat managers = 250

% of households and number of goats

	0	1	2	3	4	5	6-10	11-15	16-20	>20	Total
January - % of HH	98.6	1.4	-	-	-	-	-	-	-	-	
- no. of goats	0	4	-	-	-	-	-	-	-	-	4
February - % of HH	99.0	0.3	0.7	-	-	-	-	-	-	-	
- no. of goats	0	2	4	-	-	-	-	-	-	-	6
March - % of HH	97.9	1.0	0.3	0.3	-	-	0.3	-	-	-	
- no. of goats	0	3	2	3	-	-	6	-	-	-	14
April - % of HH	97.6	1.4	-	0.3	-	-	-	0.3	-	-	
- no. of goats	0	4	-	3	-	-	-	14	-	-	21
May - % of HH	96.2	1.4	1.0	0.3	0.7	-	-	-	-	0.3	
- no. of goats	0	4	6	3	8	-	-	-	-	25	46
June - % of HH	98.3	0.3	0.3	0.3	-	-	0.3	-	0.3	-	
- no. of goats	0	1	2	3	-	-	9	-	20	-	35
September - % of HH	99.0	0.3	0.3	-	0.3	-	-	-	-	-	
- no. of goats	0	1	2	-	4	-	-	-	-	-	7
October - % of HH	99.7	-	0.3	-	-	-	-	-	-	-	
- no. of goats	0	-	2	-	-	-	-	-	-	-	2
December - % of HH	99.3	0.3	-	0.3	-	-	-	-	-	-	
- no. of goats	0	1	-	3	-	-	-	-	-	-	4
Month unknown - % of HH	91.4	2.8	2.1	0.7	-	0.3	0.9	0.3	0.3	-	
- no. of goats	0	8	12	6	-	5	22	15	20	-	88
Total number of goats	0	28	30	21	12	5	37	29	40	25	227
Under (over) counting											47

Table 8.20: Location of Goat Deaths

n = 536
no. of goat managers = 235

% of households and number of goats

	0	1	2	3	4	5	6-10	11-15	16-20	>20	Total
Village area - % of HH	89.0	4.1	2.7	1.7	1.0	0.7	0.6	-	-	-	
- no. of goats	0	12	16	15	12	10	15	-	-	-	80
Summer grazing area - % HH	91.4	2.4	1.0	1.7	0.3	-	0.9	0.6	0.3	0.9	
- no. of goats	0	7	6	15	4	-	22	19	20	87	180
On trek to grazing area											
- % of HH	99.0	0.7	-	-	-	-	-	-	0.3	-	
- no. of goats	0	2	-	-	-	-	-	-	20	-	22
Total	0	21	22	30	16	10	37	19	40	27	282
Under (over) counting											(8)

Table 8.21: Reported Reasons for Goats Deaths

n = 536
no. of goat managers = 235

% of households and number of goats

	0	1	2	3	4	5	6-10	11-15	16-20	>20	Total
Old age - % of HH	99.0	0.7	-	-	0.3	-	-	-	-	-	
- no. of goats	0	2	-	-	4	-	-	-	-	-	6
Starvation - % of HH	93.0	-	0.7	-	-	-	-	-	-	-	
- no. of goats	0	-	4	-	-	-	-	-	-	-	4
Drought - % of HH	99.0	0.3	0.3	-	-	-	0.3	-	-	-	
- no. of goats	0	1	2	-	-	-	9	-	-	-	12
Disease unspecified - % HH	95.0	0.7	1.7	1.0	-	0.3	0.6	-	-	0.3	
- no. of goats	0	2	10	9	-	5	13	-	-	40	79
Bluetongue - % of HH	99.7	-	0.3	-	-	-	-	-	-	-	
- no. of goats	0	-	2	-	-	-	-	-	-	-	2
Anthrax - % of HH	99.3	-	0.3	-	-	-	0.3	-	-	-	
- no. of goats	0	-	2	-	-	-	8	-	-	-	10
Drowning - % of goats	99.3	0.3	-	0.3	-	-	-	-	-	-	
- no. of goats	0	1	-	4	-	-	-	-	-	-	5
Bloat - % of HH	99.0	0.7	-	-	-	0.3	-	-	-	-	
- no. of goats	0	2	-	-	-	5	-	-	-	-	7
Unknown causes - % of HH	94.8	2.4	0.7	1.0	0.3	-	0.6	-	-	-	
- no. of goats	0	7	4	9	4	-	15	-	-	-	39
Injury - % of HH	97.9	0.7	0.7	-	-	-	-	0.3	0.3	-	
- no. of goats	0	2	4	-	-	-	-	15	20	-	41
Predators - % of HH	97.6	0.7	1.4	-	-	-	-	0.3	-	-	
- no. of goats	0	2	8	-	-	-	-	14	-	-	24
Weather - % of HH	97.3	0.7	0.3	0.3	-	-	-	0.3	-	0.6	
- no. of goats	0	2	2	3	-	-	-	15	-	47	69
Total number of goats	0	21	38	25	8	10	45	44	20	87	298

Under (over) counting. (24)

Table 8.22: Use of Meat from Fallen Goats

n = 536
no. of goat managers = 235

% of households and number of goats

Use of meat	0	1	2	3	4	5	6-10	11-15	16-20	>20	Total
Consumed in household - % HH	86.9	6.2	2.4	1.7	0.7	0.7	1.4	-	-	-	
- no. of goats	0	18	14	15	8	10	30	-	-	-	95
Consumed by Relative/friend											
- % of HH	97.3	0.7	1.0	0.3	-	-	-	0.3	-	0.3	
- no. of goats	0	2	6	3	-	-	-	15	-	22	48
Sold in village area - % HH	97.7	-	-	-	-	-	0.3	-	-	-	
- no. of goats	0	-	-	-	-	-	15	-	-	-	15
Consumed by shepherds - % HH	97.9	0.3	0.3	0.3	-	-	0.3	0.3	-	0.3	
- no. of goats	0	1	2	3	-	-	7	15	-	40	68
Fed to dogs - % of HH	99.7	-	0.3	-	-	-	-	-	-	-	
- no. of goats	0	-	2	-	-	-	-	-	-	-	2
Thrown away - % of HH	98.3	1.0	-	-	-	-	0.3	-	0.3	-	
- no. of goats	0	3	-	-	-	-	10	-	20	-	33
Total number of goats	0	24	24	21	8	10	62	30	20	92	290
Under (over) counting											(16)

Table 8.23: Use of Offal from Fallen Goats

n = 536
no. of goat managers = 235

% of households and number of goats

Use of offals	0	1	2	3	4	5	6-10	11-15	16-20	>20	Total
Consumed in household - % HH	87.7	5.8	2.4	1.4	0.7	0.7	1.4	-	-	-	
- no. of goats	0	17	14	12	8	10	30	-	-	-	91
Consumed by Relative/friend - % of HH	97.9	0.3	0.7	0.3	-	-	-	0.3	-	0.3	
- no. of goats	0	1	4	3	-	-	-	14	-	22	44
Consumed by shepherds - % HH		97.6	0.7	0.3	0.3	-	-	0.3	0.3	-	0.5
- no. of goats	0	2	2	3	-	-	7	15	-	40	69
Fed to dogs - % of HH	99.3	-	0.3	0.3	-	-	-	-	-	-	
- no. of goats	0	-	2	3	-	-	-	-	-	-	5
Thrown away - % of HH	98.3	1.4	-	-	-	-	-	-	0.3	-	
- no. of goats	0	4	-	-	-	-	-	-	20	-	24
Sold village area - % of HH	99.7	-	-	-	-	-	-	0.3	-	-	
- no. of goats	0	-	-	-	-	-	-	15	-	-	15
Mafisad out - % of HH	99.0	-	0.7	-	-	-	0.3	-	-	-	
- no. of goats	0	-	4	-	-	-	8	-	-	-	12
Total number of goats	0	24	26	21	8	10	45	44	20	62	260
Under (over) counting											(16)

Table 8.24: Curing of skins from fallen goats

n = 536
no. of goat managers = 235

% of households and number of skins

	0	1	2	3	4	5	6-10	11-15	16-20	>20	Total
Sundried - % of HH	88.3	3.4	2.4	1.4	1.4	0.7	1.3	0.3	-	0.6	
- no. of skins	0	10	14	12	16	10	31	11	-	45	149
Dry or Wet salted - % of HH	98.6	0.7	0.3	0.3	-	-	0.3	0.3	-	-	
- no. of skins	0	2	2	3	-	-	6	15	-	-	28
Not cured - % of HH	98.3	0.3	0.3	0.3	0.3	-	-	0.3	-	-	
- no. of skins	0	1	2	3	4	-	-	14	-	-	24
Total number of skins	0	13	18	18	20	10	37	40	-	45	201
Under (over) counting											73

Table 8.25: Use of skins from fallen goats

n = 536
no. of goat managers = 235

% of households and number of skins

	0	1	2	3	4	5	6-10	11-15	16-20	>20	Total
Thrown away - % of HH	93.1	2.1	2.1	0.7	0.7	0.3	-	0.3	0.3	0.3	
- no. of skins	0	6	12	6	8	5	-	14	20	40	111
Sold village area - % of HH	99.7	-	-	-	-	-	-	-	-	0.3	
- no. of skins	0	-	-	-	-	-	-	-	-	22	22
Kept for clothing - % of HH	99.0	1.0	-	-	-	-	-	-	-	-	
- no. of skins	0	3	-	-	-	-	-	-	-	-	3
Kept for bedding - % of HH	89.3	4.1	1.4	1.4	1.0	0.3	1.7	0.3	-	0.3	
- no. of skins	0	12	8	12	12	5	37	11	-	25	122
Kept, other reasons - % HH	98.6	-	-	0.3	-	-	0.3	0.3	-	0.3	
- no. of skins	0	-	-	3	-	-	9	15	-	30	57
Eaten by dogs - % of HH	98.8	1.2	-	-	-	-	-	-	-	-	
- no. of skins	0	2	-	-	-	-	-	-	-	-	2
Total number of skins	0	23	20	21	20	10	46	40	20	117	317
Under (over) counting											(43)

Table 8.26: Horses Deaths by Sex

n = 536
no. of horse managers = 273

% of households and number of horses

	0	1	2	3	4	5	6-10	Total
Female - % of HH	97.6	1.7	0.3	0.3	-	-	-	
- no. of horses	0	5	2	3	-	-	-	10
Male - % of HH	97.3	2.0	0.7	-	-	-	-	
- no. of horses	0	6	4	-	-	-	-	10
Total number of horses	0	11	6	3				20

Table 8.27: Horses Deaths, by month

n = 536
no. of horse managers = 273

% of households and number of horses

	0	1	2	3	4	5	6-10	Total
January - % of HH	99.7	0.3	-	-	-	-	-	
- no. of horses	0	1	-	-	-	-	-	1
March - % of HH	99.7	0.3	-	-	-	-	-	
- no. of horses	0	1	-	-	-	-	-	1
April - % of HH	99.3	0.3	-	0.3	-	-	-	
- no. of horses	0	1	-	4	-	-	-	5
May - % of HH	99.3	0.3	0.3	-	-	-	-	
- no. of horses	0	1	2	-	-	-	-	3
June - % of HH	97.7	-	-	0.3	-	-	-	
- no. of horses	0	-	-	3	-	-	-	3
July - % of HH	99.7	-	0.3	-	-	-	-	
- no. of horses	0	-	2	-	-	-	-	2
August - % of HH	99.7	-	-	0.3	-	-	-	
- no. of horses	0	-	-	3	-	-	-	3
September - % of HH	99.3	0.7	-	-	-	-	-	
- no. of horses	0	2	-	-	-	-	-	2
Month unknown - % of HH								
Total number of horses	0	6	4	10	-	-	-	20
Under (over) counting								0

Table 8.28: Location of Horses Deaths

n = 536
no. of horse managers = 273

	% of households and number of horses							
	0	1	2	3	4	5	>5	Total
Village area - % of HH	95.9	2.4	1.0	0.7	-	-	-	
- no. of horses	0	7	6	6	-	-	-	19
Summer grazing area								
- % of HH	99.7	-	-	0.3	-	-	-	
- no. of horses	0	-	-	4	-	-	-	4
Total number of horses	0	7	6	10	-	-	-	23

Table 8.29: Reasons reported for horse deaths

n = 536
no. of horse managers = 273

	% of households number of horses							
	0	1	2	3	4	5	>5	Total
Old Age - % of HH	99.7	0.3	-	-	-	-	-	
- no. of horses	0	1	-	-	-	-	-	1
Starvation - % of HHf	99.3	0.7	-	-	-	-	-	
- no. of horses	0	2	-	-	-	-	-	2
Drought - % of HH	99.0	0.3	0.3	-	0.3	-	-	
- no. of horses	0	1	2	-	4	-	-	7
Disease - % of HH	98.6	1.0	-	0.3	-	-	-	
- no. of horses	0	3	-	3	-	-	-	6
Mange - % of HH	99.7	-	-	0.3	-	-	-	
- no. of horses	0	-	-	1	-	-	-	1
Unknown causes - % of HH	99.3	0.3	0.3	-	-	-	-	
- no. of horses	0	1	2	-	-	-	-	3
Injury - % of HH	99.7	0.3	-	-	-	-	-	
- no. of horses	0	1	-	-	-	-	-	1
Total number of horses	0	9	4	4	4	-	-	21
Under (over) counting								(1)

Table 8.30: Use of meat and offal from fallen horses

n = 537
no. of horse managers = 273

% of households and number of horses

Use of meat	0	1	2	3	4	5	>5	Total
Consumed by household								
- % of HH	97.3	1.7	0.7	0.3	-	-	-	
- no. of horses	0	5	4	4	-	-	-	13
Consumed by Relative/friend								
- % of HH	99.0	0.7	-	0.3	-	-	-	
- no. of horses	0	2	-	3	-	-	-	5
Thrown away - % of HH	99.7	-	-	0.3	-	-	-	
- no. of horses	0	-	-	3	-	-	-	3
Total number of horses	0	7	4	10	-	-	-	21
Under (over) counting								(1)
Use of offals								
Consumed by household								
- % of HH	98.3	1.7	-	-	-	-	-	
- no. of horses	0	5	-	-	-	-	-	5
Consumed by Relative/friend								
- % of HH	99.0	0.7	-	0.3				
- no. of horses	0	2	-	3	-	-	-	5
Fed to dogs - % of HH	99.7	-	-	-	0.3	-	-	
- no. of horses	0	-	-	-	4	-	-	4
Total number of horses	0	7	-	3	4	-	-	14
Under (over) counting								(6)

Table 8.31: Curing of Hides from fallen horses

n = 536

no. of horse managers = 273

% of households number of hides

	0	1	2	3	4	5	>5	Total
Sundried - % of HH	97.0	2.4	0.3	0.3	-	-	-	
- no. of hides	0	7	2	3	-	-	-	12
Dry salted - % of HH	99.7	-	0.3	-	-	-	-	
- no. of hides	0	-	2	-	-	-	-	2
Not cured - % of HH	99.3	-	0.3	-	0.2	-	-	
- no. of hides	0	-	2	-	4	-	-	6
Total number of hides	0	7	6	3	4	-	-	20
Under (over) counting							0	

Table 8.32: Use of hides from fallen horses

n = 536

no. of horse managers = 273

% of households reporting and number of hides

	0	1	2	3	4	5	>5	Total
Thrown away - % of HH	98.0	1.0	0.3	0.3	0.3	-	-	
- no. of hides	0	3	2	3	4	-	-	12
Kept for bedding - % of HH	98.3	1.0	0.3	0.3	-	-	-	
- no. of hides	0	3	2	3	-	-	-	8
Kept for other reasons								
- % of HH	99.7	0.3	-	-	-	-	-	
- no. of hides	0	1	-	-	-	-	-	1
Total number of hides	0	7	4	6	4	-	-	21
Under (over) counting								(1)

Table 8.33: Donkeys Deaths, by Sex

n = 536

no. of donkey managers = 250

% of households and number of donkeys

	0	1	2	>2	Total
Female - % of HH	98.1	1.9	-	-	
- no. of donkeys	0	5	-	-	5
Male - % of HH	98.9	1.1	-	-	
- no. of donkeys	0	3	-	-	3
Total number of donkeys	0	8	-	-	8

Table 8.34: Donkey Deaths, by month

n = 536
no. of donkey managers = 250

% of households and number of donkeys

	0	1	2	>2	Total
January - % of HH	99.7	0.3	-	-	
- no. of donkeys	0	1	-	-	1
July - % of HH	99.2	0.8	-	-	
- no. of donkeys	0	2	-	-	2
August - % of HH	99.6	0.4	-	-	
- no. of donkeys	0	1	-	-	1
September - % of HH	99.6	0.4	-	-	
- no. of donkeys	0	1	-	-	1
November - % of HH	99.2	0.8	-	-	
- no. of donkeys	0	2	-	-	2
December - % of HH	99.6	0.4	-	-	
- no. of donkeys	0	1	-	-	1
Total number of donkeys	0	8	-	-	8
Under (over) counting					0

Table 8.35: Location of Donkey Deaths

n = 536
no. of donkey managers = 250

% of households and number of donkeys

	0	1	2	>2	Total
Village area - % of households		97.4	-	-	2.6
- no. of donkeys	0	-	-	7	7
Summer grazing area - % of HH		99.2	0.8	-	-
- no. of donkeys	0	2	-	-	2
Total number of donkeys	0	2	-	7	9
Under (over) counting					(1)

Table 8.36: Reasons reported for donkey deaths

n = 536
no. of donkey managers = 250

	% of households no. of donkeys				
	0	1	2	>2	Total
Old Age - % of HH	99.6	0.4	-	-	
- no. of donkeys	0	1	-	-	1
Lightning - % of HH	99.6	-	0.4	-	
- no. of donkeys	0	-	2	-	2
Disease - % of HH	99.6	0.4	-	-	
- no. of donkeys	0	1	-	-	1
Anthrax - % of HH	99.6	0.4	-	-	
- no. of donkeys	0	1	-	-	1
Unknown causes - % HH	99.2	0.8	-	-	
- no. of donkeys	0	2	-	-	2
Injury - % of HH	99.6	0.4	-	-	
- no. of donkeys	0	1	-	-	1
Weather - % of HH	99.2	0.8	-	-	
- no. of donkeys	0	2	-	-	2
Total number of donkeys	0	8	2	-	10
Under (over) counting					(2)

Table 8.37: Use of meat and offal from fallen donkeys

n = 536

no. of donkey managers = 250

% of households and number of donkeys

	0	1	2	>2	Total
Use of meat					
Consumed by household					
- % of HH	98.9	0.8	0.4	-	
- no. of donkeys	0	2	2	-	4
Consumed by Relative /friend - % of HH	99.6	0.4	-	-	
- no. of donkeys	0	1	-	-	1
Fed to dogs - % of HH	99.6	0.4	-	-	
- no. of donkeys	0	1	-	-	1
Thrown away - % of HH	98.9	1.1	-	-	
- no. of donkeys	0	3	-	-	3
Total number of donkeys	0	7	2	0	9
Under (over) counting					(1)
Use of offals					
Consumed by household					
- % of HH	98.9	0.8	0.4	-	
- no. of donkeys	0	2	2	-	4
Consumed by Relative /friend - % of HH	99.6	0.4	-	-	
- no. of donkeys	0	1	-	-	1
Fed to dogs - % of HH	99.6	0.4	-	-	
- no. of donkeys	0	1	-	-	1
Thrown away - % of HH	99.2	0.8	-	-	
- no. of donkeys	0	2	-	-	2
Eaten by vultures - % HH	99.6	0.4	-	-	
- no. of donkeys	0	1	-	-	1
Total number of donkeys	0	7	2	-	9
Under (over) counting					(1)

Table 8.38: Curing of Hides from fallen donkeys

n = 536
no. of donkey managers = 250

% of households number of hides

	0	1	2	>2	Total
Sundried - % of HH	97.9	1.1	-	-	
- no. of hides	0	3	-	-	3
Not cured - % of HH	99.2	0.4	0.4	-	
- no. of hides	0	1	2	-	3
Total number of hides	0	4	2	-	6
Under (over) counting					2

Table 8.39: Use of hides from fallen donkeys

n = 536
no. of donkey managers = 250

% of households reporting and number of hides

	0	1	2	>2	Total
Thrown away - % of HH	98.9	0.8	0.4	-	
- no. of hides	0	2	2	-	4
Sold to LPMS - % of HH	99.6	0.4	-	-	
- no. of hides	0	1	-	-	1
Kept for bedding - % HH	98.9	1.1	-	-	
- no. of hides	0	3	-	-	3
Kept for other reasons					
- % of HH	99.6	0.4	-	-	
- no. of hides	0	1	-	-	1
Total number of hides	0	7	2	-	9
Under (over) counting					(1)

9. WOOL AND MOHAIR CLIPPING AND MARKETING

The marketing system for wool and mohair has evolved for over a hundred years to the point where the system is now comprised of three major marketing channels. Firstly, there is complex of government-owned woolsheds which export the two products to South African markets through the Livestock Products Marketing Service (LPMS), a government body charged with facilitating and regulating the marketing of livestock and livestock products. Secondly, there is a smaller number of privately-owned licensed woolsheds which take possession of wool and mohair and export the products to the South African markets. Thirdly, there is an unknown number of private unlicensed traders who 'smuggle' the products out of the country. The first two channels operate on a two payment system: LPMS issues first payments between thirty and ninty days after the farmer deliveries; private licensed traders make first payments at the time they take possession. Both LPMS and private licensed traders make final payments at the end of the marketing season. Smugglers make their only payment at the time they take possession from farmers.

Sheep and goats are clipped at three locations: at the farmers' homes, at government woolsheds, and at the woolsheds of private traders. LPMS only accepts wool and mohair from sheep and goats clipped at the sheds. Private licensed traders accept wool and mohair which is either home-clipped or clipped at their woolsheds. Most or all of the wool and mohair purchased by smugglers is home-clipped. The choice of clipping location may be somewhat determined by the type of sheep and goats owned by the farmers. LPMS does not accept the wool or mohair from coloured animals, while both private licensed traders and smugglers do. Sheep and goats may be clipped once or twice per year.

An attempt was made during the survey to collect data on a number of aspects of wool and mohair clipping and marketing. The main questions to be answered were as follows: (1) What are the relative importance of the three alternative marketing channels? (2) Why do people choose to use different marketing channels? (3) When are sheep and goats clipped? (4) Where is clipping taking place? (5) How many sheep and goats are not clipped? (6) What are the main reasons preventing people from clipping their sheep and goats? (7) How much revenue did the sheep-holding households generate from the sale of wool and mohair? It is hoped that this data will assist any new initiatives taken to improve the marketing system.

WOOL CLIPPING AND MARKETING

Dates of first and second sheep clipping are reported in table 9.1. The data indicate that of 192 households which reported a first clipping, only 8 reported a second clipping. Of the households reporting information about the date of first clipping, 79 percent reported clipping between September and December. October and November were the months of greatest clips, June was the only month with no reported clippings. A total of 9739 sheep were reported to have been clipped once, only 374 sheep were clipped twice (table 9.2). Appoximately two-thirds of the households clipped at government woolsheds (65.6), 30.7 percent of the households clipped at

home, 3.8 percent clipped at private woolsheds (table 9.3).

First and second payments received from wool sales are reported in table 9.4, with those payments classified by the channel through which the wool was marketed. The data indicate that households with larger flocks generally sold their wool through LPMS, while those with smaller flocks sold to private traders and unknown buyers (likely smugglers in both cases as only two households reported second payments from these buyers). For the 71 households reporting selling through LPMS, the highest proportion (29.4 percent) reported receiving between first payments between M26 and M50, while 2.8 percent reported first payments between M1000 and M2000. The average first payment for LPMS sales was M165.04, and the average second payment was M111.09. 33 households reported selling wool to Frasers, and receiving average first payments of M83.88 and average second payments of M41. Payments received by households selling to other shops (28 households) and private traders (17 households) were very similar. 12 sellers received average total payments of M47.67 from 'unknown buyers'. The data indicate that many of the households had not yet received the second payments for their wool. Only 21 of 71 respondants indicated receipt of second payments from LPMS, 11 of 33 from Frasers, 10 of 28 from other shops, and 2 of 17 from other private traders. Most respondants expected second payments to be forthcoming.

Months when payments were received for wool sales are reported in table 9.5. Comparison of that data with the data on wool clipping found in table 9.1 provides a rough indication of the average length of time that wool sellers must wait before receiving payment. While most of the sheep are clipped between September and December, most of the payments are received between October and April. Only 6 of the households reported receiving credit against second payments for wool (table 9.6).

When asked if they had any sheep which were not clipped, 72 of the households reported in the affirmative, indicating a total of 1243 sheep not clipped (table 9.7). (The number not clipped can also be calculated as the difference between the total number of sheep, 13654, and the number of sheep reported not clipped, 9739, to generate a difference of 3915.) When asked the reasons for not clipping, a variety of reasons were cited. The most commonly given reason was that the animals were lambs (54 percent), and the next most common was that the animals had coloured wool (24 percent). 'Were recently acquired', 'were at cattle post', 'were pregnant', 'no arrangements wer made' and 'were ill', were reasons given by a small number of respondants (table 9.8).

MOHAIR CLIPPING AND MARKETING

Dates of goat clipping are reported in table 9.9. Only 9 percent of the 235 goat managers reported a second clip. 78 percent of the respondants which knew the date of first clip reported March, April or May clippings. Goats were clipped in every month. Of 235 households which manage goats, 198 reported a first clip and 29 reported a second clip. A total of 6327 goats were clipped in the first clip and 640 were clipped in the second clip. The average reporting household clipped 32 goats in the first clip and 22 in the second clip (table 9.10).

Locations of goat clipping are summarized in table 9.11. While government woolsheds were the most popular place for first goat clips (38.5 percent), large percentages were clipped at private woolsheds (34.0 percent), and at home (27.0 percent). Compared to the locations of sheep clipping, there is a general shift away from the government woolsheds towards the private woolsheds for goat clipping.

First and second payments for mohair clip are summarized in table 9.12. Of the 40 households which reported payment received or expected from LPMS, 42.1 percent had not yet received their first payment, while 52.2 percent had received average payments of M117.83. Only 16.2 percent had received second payments averaging M213.27. First payments had been received by almost all households selling to Frasers, other shops, and other private traders. First payments from Frasers averaged M160.38, from other shops, M62.48, from other private traders, M37.50. Dates of first and second payments are reported in table 9.13.

Table 9.14 presents information collected on the number of goats not clipped, and table 9.15 presents the reasons why those animals were not clipped. A total of 53 goat-holding households reported 599 goats not clipped, 370 of which were held by only two households. The most important reason for not clipping goats was that they had coloured mohair (53.6 percent) and the second most important was that they were kids (33.9 percent). Other reasons given were 'recently acquired', 'it was cold', and 'they were few in number'. (The difference between the number of adult goats [8808] and the number of goats clipped [6327] is 2481.)

REASONS FOR SELLING AND NOT SELLING TO ALTERNATIVE MARKET OUTLETS

Future initiatives taken to improve the performance of the marketing system for wool and mohair will have to consider farmer preferences and complaints. The data contained in tables 9.3 and 9.12 established the relative utilization of the alternative market outlets. In this section the focus is shifted to farmer attitudes towards those market outlets. In particular, respondants were asked to indicate why they did sell to the alternative market outlets, or alternatively, why they did not sell to those outlets. The market outlets were grouped into three categories, LPMS, private licensed traders (including Frazers and other shops), and private unlicensed traders (including other traders and unknown buyers).

In table 9.16 the reasons why the households sold through LPMS are given, with the reasons ranked as most important, second most important, and third most important. From this data it is clear that LPMS has the reputation for paying highest prices for wool and mohair. Of the 96 responses of most important reasons for selling through LPMS, 59 indicated 'gives highest total payment' and 5 indicated 'gives highest first payment'. Accessibility is another important attraction of LPMS. 13 households reported that the most important reason for selling to LPMS was that it was the 'only market available', while 6 households indicated that LPMS was the 'closest market available'. The final important attraction of LPMS was its reputation for giving highest grades, 30 percent of the second most important reasons were 'gives best grades' (table 9.16).

High payment and accessibility also featured high on the list of

reasons stated for selling to private licensed traders, though far less households indicated that private licensed traders give the highest total payment. 29 percent of the households stated the most important reason for selling to private licensed traders to be 'gives highest total payment', and 9.2 percent indicated 'gives highest first payment'. 16.8 percent of the respondants indicated the most important reason to be 'closest market available', and 12.6 percent indicated 'only market available' to be the most important reason. Prompt payment was the other important reason for selling to private licensed traders, 18.5 percent of the respondants indicated prompt payment to be the most important reason (table 9.17).

While 96 households gave responses for why they sold through LPMS and 119 households gave responses for why they sold to private licensed traders, only 32 indicated why they sold to private unlicensed traders. This low response likely indicated a low use of unlicensed traders, but may also have been influenced by a mistrust of the enumerators. For those households which did respond, 43.8 percent indicated the most important reason to be 'closest market available', while 28 percent indicated 'pays most promptly' to be most important. Only 3 respondants indicated that the highest payment is obtained from unlicensed traders (table 9.18).

In tables 9.19 to 9.21 the reasons why the households did not sell through the alternative market outlets are given, with the reasons ranked as most important, second most important, and third most important. For the most important reason why households did not sell through LPMS, 60 percent of 55 households reported 'pay too slowly', while small numbers reported 'charge too high commissions', 'too far away', 'pay too low', and 'doesn't buy coloured wool/mohair'. 'Doesn't pay with cash' and 'pay too slowly' were the most important secondary reasons for not selling through LPMS.

The information on table 9.20 of the reasons why the households did not sell to private licensed traders contrast markedly with the reasons for not selling through LPMS. Only 4 percent of 55 responses for most important reason were 'pay too slowly', while 60 percent of the responses were 'pay too low', 16 percent were 'unreliable', and small percentages of the responses were 'charge high commission', 'give low grade', and 'doesn't buy coloured wool/mohair'. 'Give low grade' and 'pay too slowly' were the most frequent responses for the second most important reason, and 'pay too low' was the most common third most important reason.

Reasons why the households did not sell to private unlicensed traders (smugglers) reported in table 9.21 indicate that smugglers were avoided due to their perceived unreliability (52 percent of most important reasons), and their low payment (34 percent of most important reasons).

Table 9.1: Dates of Sheep Clips (n = 537)

number of sheep managers = 250

	First Sheep Clip		Second Sheep Clip	
	No. of HH	% of HH	No. of HH	% of HH
January	6	2.5	1	0.5
February	5	2.1	1	0.5
March	4	1.6	1	0.5
April	6	2.5		-
May	7	2.9		-
June		-		-
July	1	0.4	1	0.5
August	9	3.7	1	0.5
September	29	11.9		-
October	47	19.3	1	0.5
November	46	18.9	2	0.9
December	25	10.3		-
December - January	1	0.4		-
Shorn while lent out	6	2.4		-
Borrowed	7	2.9		-
Information not available	28	11.5		-
Total HH with clipped sheep	192	93.3	8	3.9

Table 9.2: Number of Sheep Clipped

n = 537
no. of sheep managers = 250

	First Sheep Clip		Second Sheep Clip	
	% of households reporting	No. of sheep	% of households reporting	No. of sheep
0	4.7	0	95.5	0
1-5	19.9	110	0.5	1
6-10	16.0	277	-	-
11-20	21.3	702	2.0	59
21-50	18.9	1420	0.5	50
51-100	9.1	1483	1.0	146
101-200	5.2	1560	0.5	118
201-300	1.5	653	-	-
301-400	0.5	336	-	-
> 400	2.9	3248		
Total	100	9739	100	374
Total HH reporting	202		9	
Mean no. of sheep clipped	48.2		41.6	

Table 9.3: Place of Sheep Clipping

n = 537
no. of sheep managers = 250

	First Clip		Second Clip	
	No. of HH	% of HH	No. of HH	% of HH
Home	62	30.7	3	30.0
Government Woolshed	133	65.8	6	60.0
Private woolshed	7	3.5	1	10.0
No. HH reporting	202	100.0	10	100.0

Table 9.4: Amount of Payments Received from Wool Sales - First Clip

n = 537

% of households reporting — no. of sheep managers = 250

Maloti	LPMS		Frasers		Other shops **		Private Trader		Buyer Unknown	
	Payment 1	Payment 2	Payment 1	Payment 2	Payment 1	Payment 2	Payment 1	Payment 2	Payment 1	Payment 2
0-25	21.0	19.0	33.3	54.5	46.4	50.0	58.8	50.0	75.0	-
26-50	29.4	19.0	27.2	9.1	28.6	20.0	11.8	-	-	-
51-100	16.8	33.0	18.1	27.3	10.8	20.0	5.8	-	8.3	-
101-200	14.0	14.1	6.0	9.1	7.2	-	11.8	50.0	8.3	-
201-400	9.8	9.4	12.0	-	-	10.0	5.9	-	8.3	-
401-1000	5.6	4.7	3.0	-	7.2	-	5.9	-	-	-
1000-2000	2.8	-	-	-	-	-	-	-	-	-
Av. pmnt	165.04	111.09	83.88	41.00	84.11	65.2	85.41	75.0	47.67	-
Total HH reporting	71	21	33	11	28	10	17	2	12	0

Payment 2 received		26.6		24.2		32.1		11.8		0
Not yet received - expected*		62.0		54.5		57.1		64.7		
Not yet received - not expected*		1.3		18.2		7.1		5.9		
Not indicated		10.1		3.0		3.6		11.8	Total HH	

* The information given is only for payment 2.

** Other Stores - (Matelile Trading Store, Lesoli Stores, Ralikoro, Nkau Trading Store, Tlokoeng Trading Store, Ha Seetsa and Sekakes Store)

Table 9.5: Dates of Wool Sale Payments

n = 537

% of households reporting no. of sheep managers = 250

	LPMS		Frasers		Other Shops		Private Trader		Buyer Unknown	
	Payment 1	Payment 2	Payment 1	Payment 2	Payment 1	Payment 2	Payment 1	Payment 2	Payment 1	Payment 2
January	9.1	-	3.7	-	7.7	-	-	-	-	-
February	3.6	8.3	7.4	-	7.7	-	10.0	-	28.6	-
March	12.7	8.3	-	-	7.7	-	20.0	-	14.3	-
April	16.4	16.7	7.4	-	-	33.3	-	-	-	-
May	3.6	16.7	3.7	-	-	-	-	-	-	-
June	1.8	-	-	-	-	-	-	-	-	-
July	1.8	33.3	-	33.3	-	-	10.0	-	-	100.0
August	3.6	-	3.7	33.3	7.7	-	-	-	-	-
September	7.3	-	22.2	-	7.7	33.3	-	-	14.3	-
October	12.7	8.3	22.2	-	15.4	-	30.0	-	-	-
November	12.7	8.3	22.2	33.3	23.1	-	20.0	-	28.6	-
December	14.5	-	7.4	-	23.1	33.3	10.0	100.00	14.3	-
Total HH reporting	55	12	27	3	13	3	12	1	7	1

Table 9.6: Do Buyers Provide Credit?

n = 537
no. of sheep managers = 250

	Number of households	% of households reporting
Yes	6	3.4
No	156	88.6
Don't Know	14	8.0
Total responses	176	100
Missing	361	-

Table 9.7: Number of Sheep Not Clipped

n = 537
no. of sheep managers = 250

Number	Number of households	Number of sheep not clipped	% of households reporting
0	105	0	59.0
1-5	27	67	15.2
6-10	16	108	9.0
11-20	14	217	7.8
21-50	10	324	5.8
51-100	2	132	1.2
101-200	3	395	1.8
Total responses	72	1243	99.8
Missing	465		

Table 9.8: Reasons for not clipping

n = 537
no. of sheep managers = 250

	Number of households	% of households reporting
Were lambs	41	53.9
Had coloured wool	18	23.7
Were recently acquired	4	5.3
Were at cattle post	1	1.3
Were pregnant	2	2.6
No arrangements were made	1	1.3
Were ill	1	1.3
Don't Know	8	10.5
Total responses	76	99.9
Missing	461	

Table 9.9: Dates of Goat Clips

n = 536
no. of goat managers = 235

	First Clip		Second Clip	
	No. of HH	% of HH	No. of HH	% of HH
January	1	0.4	0	-
February	1	0.4	0	-
March	8	3.4	1	0.5
April	49	20.9	2	1.0
May	64	27.2	8	4.1
June	25	10.6	3	1.5
July	9	3.8	-	-
August	5	2.1	1	0.5
September	6	2.5	1	0.5
October	3	1.3	1	0.5
November	5	2.1	-	-
December	2	0.9	1	0.5
Shorn while lent out	6	2.5	-	-
Just acquired	9	-	-	-
Info. not available	33	14.4	-	-
Not Clipped	9	3.8	177	90.8

Table 9.10: Number of Goats Clipped

n =
no. of goat managers =

	First Goat Clip			Second Goat Clip		
	No. of HH	% of HH	No. of goats	No. of HH	% of HH	No. of go
0	8	3.9	0	172	86.4	0
1-5	39	18.9	132	3	1.5	10
6-10	44	21.4	366	6	3.0	50
11-20	42	20.4	671	9	4.5	127
21-50	38	18.4	1212	6	3.0	203
51-100	21	10.2	1419	3	1.5	250
101-200	9	4.4	1123	-	-	-
201-300	3	1.5	661	-	-	-
301-400	2	1.0	743	-	-	-
Total	206	100.1	6327	199	99.9	640

Table 9.11 Place of Goat Clipping

n = 536
no. of goat managers = 235

	First Clip		Second Clip	
	No. of HH	% of HH	No. of HH	% of HH
Home	54	27.0	10	33.3
Government Woolshed	77	38.5	10	33.3
Private woolshed	68	34.0	10	33.3
Home and woolshed	1	0.5	-	-
Total	200	100.0	30	99.9

Table 9.12: Amount of Payments Received from Mohair Sales

n = 536

% of households reporting* no. of goat managers = 235

Maloti	LPMS		Frasers		Other Shops		Private Traders	
	Payment 1	Payment 2	Payment 1	Payment 2	Payment 1	Payment 2	Payment 1	Payment 2
0-25	11.7	7.2	31.0	6.4	37.5	11.1	29.5	10.0
26-50	14.4	15.5	3.2	28.0	3.7	5.9	20.0	
51-100	13.0	1.8	12.9	3.2	12.4	11.1	5.9	-
101-200	3.9	3.6	10.4	6.4	9.4	7.4	5.9	-
201-400	6.6	-	7.7	-	-	-	-	-
401-1000	2.6	3.6	2.6	3.2	-	-	-	-
Not received	42.1	75.4	5.1	58.1	3.1	59.3	17.6	20.0
Av. pmnt.	117.83	213.27	94.06	160.38	62.48	69.66	37.5	32.67
Total	40	11	32	8	29	9	8	3

* Column totals will not add to 100. The difference between column totals and 100 is accounted for by those goat owning households which did not clip, or sell, or don't know.

Table 9.13: Dates of Mohair Sale Payments

n = 536

% of households reporting* no. of goat managers = 235

	LPMS		Frasers		Other Shops		Private Trader	
	Payment 1	Payment 2	Payment 1	Payment 2	Payment 1	Payment 2	Payment 1	Payment 2
January	-	-	-	-	-	-	-	-
February	1.7	-	3.6	-	-	-	-	-
March	6.8	-	-	-	-	-	-	-
April	1.7	2.0	14.3	4.5	5.0	10.0	18.2	-
May	11.9	-	32.1	4.5	35.0	5.0	9.1	-
June	6.8	3.9	21.4	-	10.0	-	-	-
July	11.9	-	10.7	-	15.0	-	9.1	-
August	1.7	-	-	-	-	-	-	-
September	1.7	-	-	-	10.0	-	-	-
October	1.7	-	-	-	-	-	-	20.0
November	-	-	-	-	-	-	-	-
December	-	2.0	-	-	5.0	-	-	-
Total	27	4	24	2	17	3	4	1

*Columns totals do not add up to 100. The difference is accounted for by those goat owning households which did not clip, or sell, or did not receive payment yet, or dont know.

Table 9.14: Number of Goats Not Clipped

n = 536
no. of goat managers = 235

	Number of households	Number of goats not clipped	% of households reporting
0	137	0	71.7
1-5	41	104	21.5
6-10	6	44	3.1
11-20	3	45	1.5
21-50	1	36	0.5
51-100	-	-	-
101-200	2	370	1.0
Total	53	599	99.3

Table 9.15: Reasons for not clipping

n = 536
no. of goat managers = 235

	No. of HH	% of HH
Were kids	19	33.9
Had coloured mohair	30	53.6
Were recently acquired	3	5.4
It was cold	3	5.4
Few in number	1	1.8
Total	56	100.1

Table 9.16: Reasons why wool and mohair are sold through LMPS

n = 537

Number of households reporting

	Most important reason	2nd most important reason	3rd most important reason
Only market available	13	1	3
Closest market available	6	7	4
Gives highest total payment	59	8	1
Gives highest first payment	5	12	2
Pays more promptly	4	1	3
Gives best grades	2	13	8
Pays in cash	1	1	0
Accepts small amounts	2	0	2
Are licensed	2	0	0
No alternative	1	1	0
I belong to association	1	0	0
Accepts any kind of wool	0	0	1
Total responses	96	44	24

Table 9.17: Reasons why wool and/or mohair are sold to private licensed traders

n = 537

Number of households reporting

	Most important reason	2nd most important reason	3rd most important reason
Only market available	15	4	4
Closest market available	20	11	5
Gives highest total payment	34	8	8
Gives highest first payment	11	13	4
Pays most promptly	22	7	4
Gives best grades	1	6	7
Pays in cash	5	0	0
Accepts all kinds of wool	1	0	0
Accepts small amounts	2	1	3
Provides credit	2	0	0
No member fee needed	1	0	0
Accepts late clip	1	0	0
Buyer is licensed	1	0	0
Helpful with sales	1	0	0
Reliable	1	0	0
Can clip anytime	0	1	0
Accepts home shorn wool	0	1	0
Accepts colored wool	0	1	0
Total responses	119	54	36

Table 9.18: Reasons why wool and/or mohair are sold to private unlicensed traders

n = 537

Number of households reporting

	Most important reason	2nd most important reason	3rd most important reason
Only market available	3	1	0
Closest market available	14	2	1
Gives highest total payment	3	2	1
Pays most promptly	9	5	3
Pays in cash	2	2	2
Accepts small amt wool	1	1	1
Accepts home shorn wool	1	0	0
Gives best grades	0	1	0
Accepts any kind of wool	0	1	1
Total responses	32	15	9

Table 9.19: Reasons why wool and/or mohair are NOT sold through LPMS

n = 537

Number of households reporting

	Most important reason	2nd most important reason	3rd most important reason
Charge too high commissions	4	2	0
Are unreliable or untrustworthy	1	0	1
Pay too slowly	31	4	0
Pay too low	2	0	0
Doesn't buy coloured wool/mohair	2	0	0
No cash to pay shearers	1	0	0
Don't accept small numbers	1	0	0
No cash to pay	3	0	0
Too far away	4	0	0
Don't know his prices	1	0	0
Doesn't take responsibility	1	0	0
Doesn't pay with cash	0	5	1
Only shear at certain times	0	1	0
Wont shear unimproved stock	0	0	0
Total responses	51	12	2

Table 9.20: Reasons why wool and mohair are NOT sold to private licensed trader

n = 537

Number of households reporting

	Most important reason	2nd most important reason	3rd most important reason
Charge high commission	3	2	2
Unreliable	9	3	0
Give low grade	3	4	3
Pay too slowly	2	4	0
Pay too low	33	1	5
Doesn't pay cash	1	0	0
Doesn't buy coloured wool/mohair	2	0	0
Too far away	1	1	0
Low 2nd payment	1	0	0
Total responses	55	15	10

Table 9.21: Reasons why wool and mohair are NOT sold to private unlicensed traders

n = 537

Number of households reporting

	most important reason	2nd most important reason	3rd most important reason
Charge high commission	3	0	1
Unreliable	38	11	8
Give low grade	2	6	5
Pay too slowly	3	4	1
Pay too low	25	16	7
Doesn't pay cash	0	2	4
Too far away	1	1	0
Doesn't give 2nd payment	1	1	0
Total responses	73	40	26

10. PRODUCTION, CONSUMPTION AND SALE OF MILK

In section 9 the most important flow products of sheep and goats--wool and mohair -- were the focus of the analysis. In this section the focus is shifted to one of the important flow products of cattle -- milk. In following sections the other important flow products -- draught power and dung -- are reviewed.

Females of all species -- cattle, sheep, goats, horses and donkeys--produce milk. The milk is either consumed by the females' progeny or is collected for human consumption. In some societies sheep and goats are major producers of milk for human consumption (see Hunter and Combs 1987), and in Lesotho, small amounts of milk are collected from sheep and goats, especially at the cattle posts by shepherds (see Dobb 1985). In this survey, however, information was only collected about the households' use of cows' milk -- the most important Lesotho milk product. Table 10.1 reports summary information about the collection, sale and purchase of milk by the surveyed households. Of a total of 537 livestock-holding households and 435 cattle-holding households, 253 collected some milk from their cows, 16 sold some milk, and 203 purchased some milk during the year.

Tables 10.2 and 10.3 report information about the breeds and ages of cows milked by the surveyed households. Households were found to manage between one and seven cows so the breed and age information is reported for cows numbered one to seven, then is aggregated for all cows. Of the 253 households which collected some milk from their cows, 239 were able to supply breed data on at least one of the cows. Of a total of 422 cows for which breed information was obtained, 19 were Friessen, 22 were Brown Swiss, 23 were Jersey, 28 were Drakensburg, and 330 were of mixed breed.

Table 10.3 reports data collected from 156 households on the ages of cows milked. For the 256 cows for which age data was supplied, the average age was 6.4 years, and the mode age was 5 years. Of those 253 households which collected milk, only 16 reported some milk sale. Twelve of those reported selling daily, two reported selling weekly, and another two reported selling four times per week. The main purchasers of the milk sold were friends or neighbours. Only one household reported selling to the dairy plant (tables 10.4 and 10.5). The average price of milk sold was 35 licenti per litre (table 10.7).

The households reported purchasing milk from a variety of sources. Local cafes were the most frequently mentioned source (118), followed by friends or neighbours (64), supermarkets (45), other (24), and friend and local cafe (15) (table 10.5). 27.6 percent of the households reported daily milk purchases, 24.3 percent reported weekly purchases, and 12.4 percent reported monthly purchases (table 10.6). The average price of milk purchased was 61 licenti per litre (table 10.7) and the average daily consumption of milk was 0.6 litres per week (table 10.8).

Table 10.1: Production, consumption & sale of milk

n = 537
no. of cattle managers = 462

	Yes		No	
	No. of HH	% of HH	No. of HH	% of HH
Was milk drawn from any cows during the year	253	50.8	245	49.2
Was milk sold during the year	16	5.1	197	94.9
Was milk purchased during the year	203	38.4	325	61.6

Table 10.2: Breeds of cows milked

n = 537
no. of cattle managers = 462

number of households reporting

Breed	Cow #1	Cow #2	Cow #3	Cow #4	Cow #5	Cow #6	Cow #7	All
Friessen	14	4	1	-	-	-	-	
Brown Swiss	14	5	1	1	1	-	-	
Jersey	17	1	2	-	-	-	3	
Drakensburg	13	8	5	2	-	-	-	
Mixed	181	80	34	14	9	7	5	
Total	239	98	43	17	10	7	8	

Table 10.3: Age of cows milked

n = 537
no. of cattle managers = 462

Number of households reporting

Age	Cow #1	Cow #2	Cow #3	Cow #4	Cow #5	Cow #6	Cow #7	All Cows
1	-	-	-	-	-	-	-	-
2	2	-	-	-	-	-	-	2
3	15	8	5	2	-	1	-	31
4	21	16	3	2	-	-	-	42
5	49	12	6	1	-	-	-	68
6	25	7	5	3	3	1	1	45
7	10	5	2	-	-	2	-	19
8	12	4	2	-	-	-	-	16
9	8	3	4	2	-	-	-	17
10	6	2	-	1	-	-	1	10
11	3	2	-	-	-	-	-	5
12	2	-	-	-	-	-	-	2
13	-	-	1	-	1	-	-	2
14	-	1	-	-	-	-	-	1
> 14	3	-	-	-	1	-	-	4
Total	156	50	28	11	5	4	2	256
Under (over) counting								166
Average age	6.0	6.8	5.9	5.9	10.4	4.8	7.5	6.4
Mode	5	4	5	5	3	2	1	5

Table 10.4: Frequency of Milk Sold

n = 537
no. of cattle managers = 462

Frequency	Number of households	Percent of households
Daily	12	75.0
Weekly	2	12.5
4 times per week	2	12.5
Total	16	

Table 10.5: Purchaser of milk sold & seller of milk purchased

n = 537
no. of cattle managers = 462

	Number of households reporting	
	Milk Seller	Milk Purchaser
Friend or neighbour	64	13
Dairy plant	-	1
Local cafe	118	-
Supermarket	45	-
Friend and local cafe	15	-
Other	24	6
Total	266	20

Table 10.6: Frequency of Milk Purchases

n = 537
no. of cattle managers = 462

	Number of households	% of households
Daily	51	27.6
4 times per week	1	.5
Every other day	1	.5
2-3 times per week	21	11.4
Every 4 days	1	.5
6 times per month	2	1.1
Weekly	45	24.3
Every fortnight	4	2.2
2-3 times per month	9	4.9
Monthly	23	12.4
Once in 3 months	6	3.2
Once in 3-4 months	1	.5
Once in 6 months	3	1.6
Once yearly	7	3.8
Occassionally	10	5.4
Total	185	

Table 10.7: Price of milk sold and purchased

n = 537
no. of cattle managers = 462

s/litre	Number of households reporting: Milk Sold	Milk Purchased
10-20	3	10
21-30	3	22
31-40	1	12
41-50	5	23
51-60	2	25
61-70	1	6
71-80	-	21
81-90	-	47
91-100	-	11
101-200	-	9
Total	17	186
Average price	.35	.61

Table 10.8: Volume of Milk Consumed per Week

n = 537

Litres	No. of HH	% of HH
0	184	47.3
<1	131	33.7
1.1 - 2	32	8.2
2.1 - 3	19	4.9
3.1 - 4	11	2.8
4.1 - 5	3	.8
5.1 - 6	3	.8
6.1 - 7	4	1.0
7.1 - 8	1	.2
8.1 - 9	1	.2

Mean = .6

11. USE OF ANIMALS AND TRACTORS FOR DRAUGHT

In section 3 of this review it was reported that 462 of the 537 livestock-managing households had access to at least one field for crop production. In this section the means used for working their fields is reported. In particular, the magnitude of the draught demand for cattle, respondants attitudes towards animal draught power, the extent to which animals have been replaced by tractors, and respondants attitudes toward the use of tractors are investigated.

UTILIZATION OF ANIMALS FOR DRAUGHT

Of the 462 households which had fields, 444 reported using a total of 1899 animals for the provision of draught power (table 11.1). Of the total number of animals, 885 were oxen, 159 were bulls, 696 were cows, 145 were cattle not specified by sex, 8 were horses, and 6 were donkeys. Comparison of these data with the inventory data reported in section 4 reveals the following levels of use of the populations of each species: (1) 84.7 percent of 1045 oxen; (2) 45.3 percent of 351 bulls; (3) 35.5 percent of 1962 cows; (4) 1.2 percent of 644 horses; and (5) 1.0 percent of 617 donkeys. Clearly oxen are the most important providers of draught power, but bulls and cows are also important (table 11.2).

The respondants were able to indicate the ages of 1115 of the 1899 animals. Of those 1115 animals the mode age was five years, the mean age 5.05 years, and the range from one to 15 years. While the mean age figure is likely biased downward as respondants are more likely to know the ages of younger animals, the data do indicate a much younger age distribution than is often assumed for draught animals (table 11.3).

Table 11.4 reports the variety of arrangements which households enter to meet their draught requirements. While 1363 of 1792 animals were owned, 181 of the animals were shared with other households, 106 were borrowed from other households, and 89 were mafisa'd in for the purposes of performing draught operations. Responding households traded labour for the draught power of 27 animals, and 26 of the animals were hired.

A variety of spans were assembled for the five major draught operations of land preparation (plowing), planting, cultivation, hauling harvest, and transportation. The most common spans for plowing were, in order of use, 4 cattle, 6 cattle, and 2 cattle. For planting and cultivation the most common span was 2 cattle, followed by 4 cattle and 6 cattle spans. Horses were used by a number of the households for hauling harvest and transportation (tables 11.5 and 11.6).

While the majority of the draught power was used for performing farm operations on own land, large numbers of draught operations were performed on others' land: 363 households reported plowing on own land, 121 reported plowing on others land; 358 reported planting on own land, 98 planted on others' land; 318 cultivated own land, 90 cultivated others' land; 243 hauled own harvest, 34 hauled others' harvest; 220 transported for own purposes, and 39 transported for others. For those households reporting the performance of each operation, the average number of days spent were as follows: (1) land preparation, own land -- 8 days, others' land -- 8.4

days; (2) planting, own land -- 5 days, others' land -- 4.1 days; (3) cultivation, own land -- 6.7 days, others' land -- 5.2 days; (4) hauling harvest, own land -- 11.9 days, others' land -- 7.8 days; and (5) transport, own land -- 6.7 days, others' land -- 3.2 days.

Despite the magnitude of the performance of draught field operations on others' land, few of the households appear to have been truly involved in commercial custom farming with draught animals. Only 15 households reported charging other households for the provision of draught operations, with the average daily charge for animals and labour being M15.93 (table 11.9). Households performing draught operations on others' land most often barter their services for some share of the harvest, expect reciporcal favours, or provide the services without expectation of payment.

OPINIONS REGARDING ANIMAL DRAUGHT POWER

Respondants were asked a series of questions to solicit their opinions about the constraints on crop farming imposed by the condition and lack of draught animals. The first question asked was: "does the condition of draught animals ever delay farm operations?" 216 households reported "yes" (table 11.10). For those households which responded yes, the second question was: "how many days does the poor condition of draught animals delay the various farm operations". The average delay was 20 days for land preparation, 15.9 days for planting, 15.5 days for cultivation, 13.8 days for harvest (table 11.11). The third question posed was: "why are draught animals in poor condition?" The most common responses were lack of range (100), drought (41), cattle were thin (32), and poor range (18) (table 11.12). The last question was: "what is the best remedy for the poor condition of animals". The most commonly suggested remedies were feed fodder (37), rain (33), grow fodder (31), good range management (22), and improved feeding (16) (table 11.13).

Apart from the condition of draught animals, two questions were asked about the lack of draught animals for performing farm operations. 195 households responded that the lack of draught animals delays farm operations on their own land, and 196 households responded that the lack delays farm operations on others' land (table 11.14). Most common reasons cited by respondants for these delays were: (1) households which lack sufficient draught animals must borrow them from other households after those households have finished those operations (86); (2) households which lack draught animals are not able to plough (46); and (3) there are no tractors in the mountains (10) (table 11.16).

UTILIZATION OF TRACTORS FOR DRAUGHT

While it was found that most households with fields utilized some animal draught power, a surprisingly large number of households also had some operations performed with tractor power. Table 11.16 reports that 133 households reported having some use of tractor power during the last year. 65.4 percent of those households were satisfied with the price, 69.1 percent were satisfied with the results, and 78.6 percent would use tractors again. The Food for Self Sufficiency Programme was involved in 18.7 percent of the cases.

Mosotho contractors were the most common owners of tractors used (72.6 percent), followed by the Government (14.1 percent), self (9.6 percent), and South African contractors (3.0 percent) (table 11.17). Tractor users satisfied with the results most commonly noted their good work (29 responses), or satisfactory yields (22 responses) (table 11.18). The smaller number of tractor users who were dissatisfied with the results noted unsatisfactory yields (6 responses) and bad work (5 responses) (table 11.19). Respondants indicated a variety of reasons why they would use tractors again including satisfied with the results (13), nothing else to use (10), own tractor (8), did good work (8), and animals are in poor condition (7) (table 11.20). High expense (7) and now have cattle (3) were the most common reasons cited for not using tractors again (table 11.21).

Table 11.1: Use of Animals for Draught Purposes

n = 537

	Number of households	% of households
Use animals for draught	444	83.9
Don't use animals for draught	85	16.1

Table 11.2: Type of Animals Used for Draught

n = 537

Number of households reporting

	Animal #1	Animal #2	Animal #3	Animal #4	Animal #5	Animal #6	Animal #7	Animal #8	Animal #9	Animal #10	Type Unknown	All Animals
Ox	262	190	147	127	52	46	15	10	4	2	-	855
Bull	40	47	21	14	10	7	7	6	4	3	-	159
Cow	120	143	123	112	71	62	27	21	10	7	-	696
Horse	3	1	-	1	1	1	1	-	-	-	-	8
Donkey	1	-	-	2	2	-	-	-	-	-	-	6
15 oxen	-	-	-	-	-	-	-	-	-	-	30*	30
10-20 cattle	-	-	-	-	-	-	-	-	-	-	45**	45
>=20 cattle	-	-	-	-	-	-	-	-	-	-	100***	100
Total	437	391	301	266	146	127	61	46	29	21	175	1899

* 15 oxen multiplied by 2 households
** Assumed 15 oxen multiplied by 3 households
*** Assumed 20 oxen multiplied by 5 households.

Table 11.3: Age of Animals Used for Draught (n = 537)

Number of households reporting

Years of Age	Animal #1	Animal #2	Animal #3	Animal #4	Animal #5	Animal #6	Animal #7	Animal #8	Animal #9	Animal #10	All Animals
1	5	1	2	-	1		1	-	1	1	12
2	14	7	2	2	3	2	1	1	-	-	32
3	21	22	15	9	7	5	4	2	1	1	87
4	37	32	23	16	5	6	1	2	2	1	125
5	46	31	19	21	10	7	6	6	3	4	153
6	21	20	14	7	4	5	2	1	1	1	76
7	13	11	2	4	3	3	-	-	-	-	36
8	8	6	4	2	1	-	-	-	-	-	21
9	6	11	7	3	2	2	-	-	-	-	31
10	5	1	2	1	1	-	-	-	-	-	10
11	1	1	-	1	1	-	-	-	1	-	5
12	1	-	1	-	-	1	1	1	-	-	5
13	-	-	-	-	-	-	-	-	-	-	
14	1	1	-	-	-	-	-	-	-	-	2
15	-	-	-	-	-	-	-	-	-	-	
16	1	1	-	-	-	-	-	-	-	-	2
<5	10	9	-	-	4	1	-	-	-	-	24
4-8	9	7	8	7	2	1	-	-	-	-	34
3-7	8	6	3	3	5	4	2	2	1	1	35
5-9	11	7	6	6	5	6	4	4	1	1	49
>10	1	-	5	7	-	-	-	-	-	-	13
>5	5	3	3	3	2	1	1	1	-	-	19
2.5	2	2	2	2	1	1	1	-	-	-	11
Total	226	179	118	94	57	45	24	20	11	10	784
Mean age	5.07	5.23	4.87	5.06	5.00	5.13	4.92	5.00	4.38	4.70	5.05

AAA not reported

Table 11.4: Arrangement of Animals used for Draught (n = 537)

Number of households reporting

Arrangement	Animal #1	Animal #2	Animal #3	Animal #4	Animal #5	Animal #6	Animal #7	Animal #8	Animal #9	Animal #10	All Animals
Owned	359	303	220	184	101	87	43	33	19	14	1363
Trade labour for draft	4	5	4	5	2	3	1	1	1	1	27
Shared animals	35	37	35	30	14	15	5	5	3	2	181
Hired animals	9	9	3	2	2	1	-	-	-	-	26
Borrowed	14	20	19	26	12	12	3	-	-	-	106
Mafisad in this	9	13	15	14	12	8	6	5	4	3	89
Total	430	387	296	261	143	126	58	44	27	20	1792
Arrangement not indicated											107

Table 11.5: Type of Span used for Farm Operations on Own Land (n = 537)

Number of households reporting

Span	Land Preparation	Planting	Cultivation	Hauling Harvest
8 cattle	5	-	1	14
6 cattle	111	48	10	15
4 cattle	215	125	53	62
2 cattle	28	184	242	51
Single bovine	11	-	7	8
2 horses	2	-	2	25
Single horse	7	-	-	12
2 cattle & horse	1	1	1	1
6 cattle & horse	1	-	-	-
6 cattle or 4 cattle	2	-	-	-
3 cattle & 1 donkey	2	-	-	-
4 cattle & 4 donkeys	-	-	1	-
8 donkeys	-	-	-	6
5-6 donkeys	-	-	-	9
4 donkeys	-	-	-	4
3 donkeys	-	-	-	11
2 donkeys	-	-	-	-
1 donkey	-	-	-	2
6 horses	-	-	-	1
2 horses & 4 donkeys	-	-	-	1
Some donkeys	-	-	-	21
Some horses & donkeys	-	-	-	-
Total	363	358	318	243

Table 11.6: Type of Span for Farm Operations on Others Land (n = 537)

Number of households reporting

Span	Land Preparation	Planting	Cultivation	Hauling Harvest
8 cattle	3	2	1	1
6 cattle	40	10	3	6
4 cattle	64	32	21	13
2 cattle	9	51	62	8
6 & 4 cattle	3	2	2	2
2 horses	1	1	1	2
1 horse	1	-	-	1
Total	121	98	90	34

Table 11.7: Days Spent with Span Performing Farm Operations on Own Land (n = 537)

Number of households reporting

Days	Land Preparation	Planting	Cultivation	Hauling Harvest	Transport	Other Job
1	14	111	32	37	86	1
2	50	73	75	28	25	-
3	57	59	66	29	16	1
4	41	19	23	20	7	2
5	30	23	12	6	7	-
6	25	7	12	7	7	1
7	41	21	23	23	17	-
8	7	5	3	2	-	-
9	7	1	7	6	-	-
10	16	4	9	2	1	-
11	2	-	-	2	-	-
12	6	3	7	2	3	-
13	-	-	-	-	-	-
14	32	15	18	14	12	-
15-20	10	2	4	4	1	-
21-30	29	18	18	42	5	-
31-60	8	6	5	5	-	-
> 60		1	4	1	-	-
Total HH	375	367	312	250	188	5
Average Days	8.0	5.0	6.7	11.9	6.7	1.0

Table 11.8: Days Spent with Span Performing Farm Operations on Others Land (n = 537)

Number of households reporting

Days	Land Preparation	Planting	Cultivation	Hauling Harvest	Transport	Other Job
1	3	29	9	6	13	-
2	18	21	26	2	4	-
3	18	18	21	1	3	1
4	14	7	6	3	4	-
5	10	4	5	2	1	-
6	5	-	-	1	1	-
7	13	4	4	4	4	-
8	2	1	1	1	-	-
9	2	-	1	2	-	-
10	4	1	2	-	-	-
11	2	-	1	-	-	-
12	3	1	2	-	-	-
13	2	1	1	3	1	-
14	4	-	2	1	-	-
15-20	5	3	4	3	-	-
21-30	6	1	1	-	-	-
31-60						
> 60						
Total HH	111	91	86	29	31	1
Average Days	8.4	4.1	5.2	7.8	3.2	3.0

Table 11.9: Charge for Performing Draught for others (n = 537)

Maloti/day	Number of households reporting
6	2
9	1
10	2
12	2
14	1
15	1
18	2
22	2
25	1
40	1
Total Households	15
Average charge (maloti/day)	15.93

Table 11.10: Does condition of draught animals ever delay farm operations? (n = 537)

	Number of households reporting	
	Yes	No
Does condition of draft animals ever delay operations	216	274

Table 11.11: Delay caused in farm operations by poor condition of draught animals (n = 537)

	Number of households reporting			
No. of days Operation Delayed	Land Preparation	Planting	Cultivation	Harvest
1	4	4	2	3
2	5	7	3	2
3	6	8	2	1
4	3	2	1	3
5	9	5	2	-
6	2	-	1	-
7	19	13	9	6
8-14	24	7	10	4
15-21	7	2	5	2
22-28	-	-	1	-
29-35	46	16	10	8
36-60	8	4	1	-
61-90	2	1	-	-
Total responses	135	69	47	29
Average Number of days	20	15.9	15.5	13.8

Table 11.12: Reasons why draught animals are in poor condition

n = 537

Reason	Number of households	% of households
Cold winter	7	3.3
Lack of range	100	47.4
Diseases	2	.9
Drought	41	19.4
Cattle were thin	32	15.2
Cattle overworked	2	.9
Still Young	1	.5
Poor range	18	8.5
No shepherds	1	.5
No fodder	5	2.4
Poor shepherds	2	.9
Total responses	211	99.9

Table 11.13: Suggested remedy for improving the condition of draught animals (n = 537)

Suggested remedy	Number of households	% of households
Feed fodder	37	20.2
Treatment	5	2.7
Grow fodder	31	16.9
Rain	33	18.0
Stop rearing cattle	1	.5
Provide warmth	3	1.6
Buy fodder	1	.5
Combine spans	1	.5
Improve water supply	1	.5
Use tractors	9	4.9
Improved feeding	16	8.7
Stop treeing range	1	.5
Good range management	22	12.0
Stop animal draught	3	1.6
No remedy	6	3.3
Reduce animal numbers	1	.5
Good shepherds	1	.5
Range reserves	10	5.5
More cattle from post to village area	1	.5
Total responses	183	99.4

Table 11.14: Does lack of draught animals ever delay farm operations? (n = 537)

	Number of households reporting	
	On others' land	On own land
Yes	196	195
No	231	301

Table 11.15: Reasons why the lack of draught animals delays farm operations (n = 537)

	Number of households reporting	
Reason	Own land	Others' land
Borrowed draught - late	86	104
Hire draught - costly	5	9
Fail to plough	46	45
Cattle need rest	6	-
No tractors in mountains	10	12
Hire tractor - too costly	4	-
Poor yields due to few animals	1	2
Delay planting	3	-
Cattle overworked	2	2
Ematiated animals used	4	-
Tractor can't work on mt. slopes	2	1
Too few animals to make a span	2	-
Cattle are vital	2	1
Forced to share crop	1	3
No food for household	1	1
Total responses	175	100

Table 11.16: Use of tractors in farm operations (n = 537)

	Number of households reporting		
Question	Yes	No	Total Responses
Was tractor(s) used?	133	387	520
Was price satisfactory?	89	47	136
Were results satisfactory?	105	47	152
Was FSSP involved?	28	122	150
Would you use tractor again?	110	30	140

Table 11.17: Ownership of tractor used in farm operations

n =537

Ownership	Number of households	% of households
Self	13	9.6
Government	19	14.1
RSA contractor	4	3.0
Mosotho contractor	98	72.6
LEMA	1	0.7
Total responses	135	100.0

Table 11.18: Reasons for satisfaction with tractor operations

(n = 537)

Reason	Number of households	% of households
Timely	1	1.3
Good Work	29	37.2
Makes soil rich	4	5.1
Deep ploughing	6	7.7
Covered its expenses	1	1.3
Production same as ox ploughing	1	1.3
Satisfactory yield	22	28.2
Only drought reduced yield	2	2.6
Don't know tractors	2	2.6
Really wanted to plough	1	1.3
Own tractor	9	11.5
Total responses	78	100.1

Table 11.19: Reasons for dis-satisfaction with results of tractor operations (n = 537)

Reason	Number of households	% of households
Bad Work	5	22.7
Low yield - high price	1	4.5
Yield unsatisfactory	6	27.3
Yield not cover cost	2	9.1
Irresponsible operator	1	4.5
Own tractor	7	31.8
Total responses	22	99.9

Table 11.20: Reasons given for using tractor again (n = 537)

Reason	Number of households	% of households
Nothing else to use	10	10.8
Satisfied	13	14.0
No animals	5	5.4
Animals poor condition	7	7.5
Husband not home	1	1.1
Ploughs deeply	3	3.2
Ox-plough too hard	2	2.1
Large fields	6	6.5
If I have money	6	6.5
Belongs to relative	2	2.1
Did good work	8	8.6
Good yield	7	7.5
Best oxen for planting	1	1.1
Timely	4	4.3
Better than oxen	2	2.1
If mistakes are rectified	1	1.1
Too few animals	3	3.2
To finish early	2	2.1
Join mantsallala (FSSP)	1	1.1
Cattle owners unreliable	1	1.2
Own tractor	8	8.6
Total responses	93	99.6

Table 11.21: Reasons given for not using tractor again (n = 537)

Reason	Number of households	% of households
Too expensive	7	50.0
Low yield	1	7.1
Intend buying cattle	1	7.1
Join mantsallala (FSSP)	1	7.1
Now have cattle	3	21.4
Husband will be back	1	7.1
Total responses	14	99.8

12. USE OF DUNG

The third important flow product produced by cattle is dung. In resource-poor Lesotho dung is commonly used as a fuel for cooking and heating, as a building material for mixing with mud in making walls and floors of houses, as a patching material for smearing over mud/dung walls and floors, and as manure for spreading on fields. Attempts were made to quantify these, and other, alternative uses of dung.

USE OF DUNG FUELS

Table 12.1 reports the number of households which indicated the use of dung fuels. The four different types of dung fuels used are: lisu--blocks of dung which are dug out of cattle kraals when the kraals are relatively dry and laid on the edge of the kraal or on flat rocks to dry; mapharoa -- similar to lisu, mapharoa are dung patties made from kraal dung when the kraals are relatively wet, then laid out to dry; khapane -- stools of cattle dung dropped by the animals while grazing; and, bokuluba--stools of horse and donkey dung dropped by those animals while grazing. Of the 537 cattle-managing households interviewed, 321 reported using lisu, 151 reported using mapharoa, 288 reported using khapane, and 152 reported using bokuluba.

To determine household utilization of dung fuels during an average winter week, respondants were asked to report their use of dung fuels "last week". (The survey was conducted during the winter season between late June and early September.) Quantities of dung are reported in numbers of bags and basins. (For a good description of the collection and use of dung fuels, as well as estimates of the weight and energy content of the dung fuels, readers are referred to Gay 1984). Data reported in table 12.2 indicate that mapharoa was the most heavily used type of dung fuel during that period; 111 households used 406 bags and 167 households used 831 basins. Khapane was the next most important; 138 households used 333 bags and 101 households used 632 basins. Lisu followed with 56 households using 199 bags and 88 households using 395 basins. Least important was bokuluba; 60 households used 137 bags and 66 households used 314 basins.

An indication of the amount of time expended by household members (primarily female members) in the collection of field dung is provided by data in tables 12.3 and 12.4. Respondants were first asked to report the number of times khapane and bokuluba were collected "last week". The most common responses were seven times, that is every day, and once. The mean frequencies were 4.2 times for khapane and 4.4 times for bokuluba. 185 households reported collecting khapane and 93 reported collecting bokuluba during the week. Collection of field dung is apparently highest during times of greatest household energy demands for cooking and heating. 237 households reported collecting field dung an average of 5.3 times per week during the winter; 207 reported an average of 5.6 times during the spring; 103 reported an average of 4.4 times during the summer; and 79 reported an average of 4.4 times during the autumn (table 12.4).

There is some market for dung fuels in Lesotho, though that market is very thinly traded. Of the 537 households interviewed, only 18 reported ever buying dung fuels and 4 reported ever selling dung fuels (table 12.5).

Buying and selling prices are reported in table 12.7. (There is some evidence that the collection of dung for sale is most frequently conducted by members of village societies who lack alternative sources of cash income, such as single elderly females, and is purchased most frequently by households who lack own sources of dung.)

USE OF DUNG FOR SMEARING ON WALLS AND FLOORS

After fuel, the second major use of dung in Lesotho is for smearing on walls and floors constructed of mud/dung. A total of 394 households reported this use (table 12.7). The respondants indicated smearing more floors and those floors more often in the summer than in the winter. 380 households reported smearing an average 2.7 house floors an average of 2.37 times per month in the summer, while for the winter 375 households reported smearing an average of 2.2 house floors an average of 2.17 times per month. Wall plastering with dung is also more frequently done in the summer. 379 households reported plastering an average of 3.1 houses in the summer, while 365 households reported plastering an average of 2.3 houses in the winter. The respondants indicated plastering walls an average of 3.11 times per year. Each floor smearing consumed an average of 1.3 basins of dung (tables 12.9 and 12.10).

OTHER USES OF DUNG

Other uses of dung were reported by 143 households. Dung was spread on fields as a fertilizer by 128 households. Twelve households reported mixing dung with livestock drugs and three reported mixing dung with pig feed.

Table 12.1: Types of Dung fuels used in the household (n = 536)

Type of Dung fuel	Number of households	% of households
Lisu	321	77.2
Mapharoa	151	35.4
Khapane	288	66.7
Bokuluba	152	35.7

Table 12.2: Amounts of dung fuels used in the household last week (n = 536)

	Number of households reporting							
Number of bags or basins	Bags of lisu	Basins of lisu	Bags of mapharoa	Basins of mapharoa	Bags of khapane	Basins of khapane	Bags of bokuluba	Basins of bokuluba
1	40	61	22	26	63	30	25	27
2	16	33	9	13	31	28	16	9
3	11	17	13	7	18	6	8	7
4	8	10	2	12	5	5	5	3
5	7	4	-	3	7	5	3	4
6	3	-	-	1	2	2	-	4
7	3	18	2	9	9	5	3	2
8	20	1	3	3	3	-	-	-
9	-	1	1	2	-	-	-	-
10	2	2	1	2	-	1	-	1
11-15	1	12	1	2	-	13	-	4
16-20	-	1	1	1	-	-	-	-
21-25	-	5	1	2	-	3	-	4
>25	-	2	-	-	-	3	-	1
Total responses	56	88	111	167	138	101	60	66
Total dung	199	395	406	831	333	632	137	314
Mean per HH respond	3.6	4.5	3.7	5.0	2.4	6.3	2.3	4.8
Total per all HH	0.37	0.74	0.76	1.55	0.62	1.18	0.26	0.58

Table 12.3: Collection of fuel dung last week (n = 536)

(times per week dung was collected)

Times per week	Number of HH reporting khapane	bokuluba
1	37	17
2	35	15
3	25	8
4	8	3
5	22	17
6	10	6
7	41	24
8	-	-
9	1	-
10	1	1
14	4	2
21	1	-
Total responses	185	93
Mean	4.2	4.4

Table 12.4: Frequency of collection of field dung (Khapane or bokuluba) in different seasons of the year (n = 536)

(times per week)

Times per week collections are made	Number of Households reporting Spring	Summer	Autumn	Winter
1	44	23	18	32
2	31	18	18	34
3	19	13	10	21
4	16	8	2	22
5	7	4	1	22
6	13	3	1	11
7	57	27	21	79
8	1	-	1	-
9	2	-	-	-
10	-	1	-	2
11-14	10	4	7	12
15-18	1	2	-	-
19-22	4	-	-	1
23-26	-	-	-	1
27-30	2	-	-	-
Total responses	207	103	79	237
Mean	5.6	4.4	4.4	5.3

Table 12.5: Household purchases and sales of dung fuels
(n = 536)

Question	No. of households
Does the HH ever buy dung fuels	18
Does the HH ever sell dung fuels	4

Table 12.6: Reported buying/selling prices for dung fuels
(n = 536)

	Number of households reporting			
Price	Lisu	Mapharoa	Khapane	Bokuluba
2 for 10 cents	2	5	-	-
M21 per bag	3	3	1	-
8 Lisu for 50 cents	5	-	-	-
25 cents per basin	3	4	3	-
R1 per bag	3	1	5	-
R1 per basin	2	2	1	19
50 cents per bag	-	-	1	-

Table 12.7: Use of dung in smearing walls and floors (n = 536)

	Number of HH reporting
Number of HH which reported smoothing floors or platering walls	394

Table 12.8: Number of floors smeared and walls plastered with dung-summer and winter (n = 536)

	No. of houses with floors smeared		No. of houses walls plastered	
Number	Summer	Winter	Summer	Winter
1	89	91	77	75
2	163	162	166	158
3	92	89	100	99
4	22	21	24	23
5	8	8	6	6
6	2	-	2	-
7	3	3	3	3
8	1	1	1	1
Total responses	380	375	379	365
Mean	2.7	2.2	3.1	2.3

Table 12.9: Number of basins of dung used for each floor smearing (n = 536)

Number of basins	Number of households
1	290
2	62
3	6
4	5
5	3
Total	366
Mean	1.3

Table 12.10: Frequency of smearing floors and plastering walls -summer and winter (n = 536)

	Number of households reporting		
	Floors smeared		Walls plastered
Times per month	Summer	Winter	Times per year
1	67	83	112
2	98	92	122
3	28	30	33
4	42	29	12
5	10	8	4
6	3	4	13
7	1	2	2
8	10	6	2
9	-	-	2
10	1	1	2
11	4	-	1
12	-	2	9
14-19	-	-	3
20	-	1	-
> 20	-	-	7
10 x per year	1	-	-
20 x per year	1	1	-
5 x per year	1	1	-
3 x per year	1	1	-
1 x per year	8	7	-
1 x per 2 months	22	19	-
1 x per 6 months	6	9	-
4 x per year	9	12	-
Total responses	313	308	324

Table 12.11: Other uses of dung (n = 536)

Use	No. of households	% of households
Manure	128	35.8
Mix with livestock drugs	12	3.4
Mix with pig feed	3	.9

13. LIVESTOCK HERDING LABOUR

The previous sections of this summary reported on the household benefits derived from the physical stock and flow products products produced by the livestock populations. In the next four sections attention is shifted to the inputs necessary for this production, the costs of these inputs, and household management of the livestock enterprises. In this section the focus is on the shepherd labour involved in herding the livestock.

A total of 476 of the 537 households reported at least one person involved in the herding of livestock. 350 of those households reported one shepherd, 92 reported two shepherds, 26 reported three shepherds, 5 reported four shepherds, and one household reported five shepherds, for an average of 1.34 shepherds per household reporting (table 13.1). The ages of the 637 shepherds ranged from 5 to 83 years, the mode age category was between 13 and 15 years, and the average age was 20.2 years (table 13.2). Most of the shepherds were either members of the families, or the household heads themselves. Only 129 were no relation to the household head (table 13.3). 514 of the shepherds were involved in herding on a full-time basis, 101 were involved only part-time (table 13.10).

The majority of the shepherds were unpaid for their efforts (likely those who were family members). Those that were paid received partial payment in terms of food (101 shepherds), clothing (85 shepherds), cattle (21 shepherds received a total of 23 cattle), sheep (53 shepherds received a total of 715 sheep), goats (2 herders received a total of 4 goats), and cash (51 shepherds received a total of M1704) (tables 13.4 to 13.9).

Location of herding was reported for 595 of the 637 shepherds (table 13.11). Of those 595 herders, 408 herded the animals only in the village area, 60 herded the animals only at the cattle posts, and 124 herded both in the village area and at the cattle posts. Most of the shepherds were employed wholly by the responding household, while 73 were shared with other households (table 13.12).

Respondants were asked a series of questions about any problems they may face in the employment of shepherds. 164 respondants indicated that there were inadequate shepherds to hire. 104 respondants indicated that shepherds cost too much. Only 17 respondants thought that shepherds are irresponsible, while 35 indicated that shepherds were unavailable because they are attending school. Three respondants indicated that parents prefer that their children are in school instead of herding, and eight indicated that parents prefer their children not to herd. Three respondants cited other problems.

Table 13.1: Total number of herders involved in herding of all animals (n = 537)

Number of herders	Number of households	% of households
0	2	0.4
1	350	73.5
2	92	19.3
3	26	5.5
4	5	1.1
5	1	0.2
Total HH with herders	476	100.0
Total no. of herders	637	
Average no. of herders / HH	1.34	

Table 13.2: Age of Herders

n = 537
no. of HH with herders = 476

No. of households reporting

Years of Age	Herder #1	Herder #2	Herder #3	Herder #4	Herder #5	All Herders
< 9	38	15	10	2	-	65
10-12	51	25	5	2	-	83
13-15	70	20	5	-	1	96
16-18	60	17	2	1	-	80
19-21	39	7	2	-	-	48
22-24	18	3	-	-	-	21
25-27	9	-	1	-	-	10
28-29	4	-	-	-	-	4
30-39	16	2	1	-	-	19
40-49	16	-	-	-	-	16
50-59	24	1	-	-	-	25
60-69	10	1	-	-	-	11
70-79	6	-	-	-	-	6
80-83	-	1	-	-	-	1
Age unknown	110	29	3	-	-	142
Total herders	471	121	29	5	1	627
Average age	22.0	15.5	12.5	10.2	13	20.2

Table 13.3: Relation of Herders to Household Head

n = 537
no. of HH with herders = 476

Number of households reporting

Relationship	Herder #1	Herder #2	Herder #3	Herder #4	Herder #5	All herders
Child	201	66	16	2	-	285
Sibling	10	4	1	-	-	15
HH head	70	10	1	-	-	81
Other relation	93	17	4	3	1	118
No relation	96	24	7	1	1	129
Total	470	121	29	6	2	628

Table 13.4: Food and Clothing Payment to Herders

n = 537
no. of HH with herders = 476

Number of households reporting payment

Payment	Herder #1	Herder #2	Herder #3	Herder #4	Herder #5	All herders
Food	80	18	3	0	0	101
Clothing	69	13	3	0	0	85

Table 13.5: Numbers of Cattle Paid to Herders per year

n = 537
no. of HH with herders = 476

Number of households reporting

Number of Cattle	Herder #1	Herder #2	Herder #3	Herder #4	Herder #5	All herders
1	17	2	-	-	-	19
2	2	-	-	-	-	2
Total herders	19	2	-	-	-	21
Total cattle	21	2	-	-	-	23

Table 13.6: Numbers of Sheep Paid to Herders per year

n = 537
no. of HH with herders = 476

Number of households reporting

Number of Sheep	Herder #1	Herder #2	Herder #3	Herder #4	Herder #5	All herders
1	15	6	3	1	1	26
2	-	-	-	-	-	-
3	1	-	-	-	-	1
4	-	-	-	-	-	-
5-10	6	2	1	-	-	9
11-20	2	1	-	-	-	3
21-30	4	1	-	-	-	5
31-40	-	2	1	-	-	3
41-50	2	1	-	-	-	3
>50	-	1	2	-	-	3
Total herders	30	14	7	1	1	53
Total sheep	287	246	180	1	1	715

Table 13.7: Numbers of Goats Paid to Herders per year

n = 537
no. of HH with herders = 476

Number of households reporting

Number of Goats	Herder #1	Herder #2	Herder #3	Herder #4	Herder #5	All herders
1	-	-	-	-	-	-
2	-	-	-	-	-	-
3	-	1	-	-	-	1
4	-	-	-	-	-	-
5-10	-	1	-	-	-	1
11-20	-	-	-	-	-	-
21-30	-	-	-	-	-	-
31-40	-	-	-	-	-	-
41-50	-	-	-	-	-	-
>50	-	-	-	-	-	-
Total herders	-	2	-	-	-	2
Total goats	-	4	-	-	-	4

Table 13.8: Numbers of Horses and Donkeys Paid to Herders per year

n = 537
no. of HH with herders = 473

Number of households reporting

Payment	Herder #1	Herder #2	Herder #3	Herder #4	Herder #5	All herders
Horses	-	-	-	-	-	-
Donkeys	-	-	-	-	-	-

Table 13.9: Cash Paid to Herders

n = 537
no. of HH with herders = 476

Number of households reporting

Maloti per Month	Herder #1	Herder #2	Herder #3	Herder #4	Herder #5	All herders
1-10	3	1	-	-	-	4
11-20	17	-	2	-	1	20
21-30	11	-	-	-	-	11
31-40	5	-	-	-	-	5
41-50	4	3	-	-	-	7
51-100	1	-	-	-	-	1
101-150	2	-	-	-	-	2
151-200	1	-	-	-	-	1
Total herders	44	4	2	-	1	51
Total cash	1495	157	36	-	16	1704

Table 13.10: Employment Status of Herder

n = 537
no. of hh with herders = 476

Number of households reporting

Status	Herder #1	Herder #2	Herder #3	Herder #4	Herder #5	All herders
Full-time	400	86	20	6	2	514
Part-time	62	31	8	-	-	101
Total herders	462	117	28	6	2	615

Table 13.11: Location of Herding

n = 537
no. of HH with herders = 476

Number of households reporting

Location	Herder #1	Herder #2	Herder #3	Herder #4	Herder #5	All herders
Village	310	84	13	1	-	408
Cattle post	45	7	6	1	1	60
Village & cattle post	91	19	9	4	1	124
No grazing	2	1	-	-	-	3
Total herders	448	111	28	6	2	595

Table 13.12: Single household or group sharing of Herders

n = 537
no. of HH with herders = 476

Number of households reporting

Employment conditions	Herder #1	Herder #2	Herder #3	Herder #4	Herder #5	All herders
Only own household	361	28	28	6	5	428
Shared with other households	71	-	-	-	2	73
Total herders	432	28	28	6	7	501

Table 13.13: Problems involved in employing herders

n = 537
no. of HH with herders = 476

Number of households reporting

Problem	Yes	No	Total Responses
Are there adequate herders to hire?	210	164	374
Do herders cost too much?	104	266	370
Are herders irresponsible?	17	353	370
Are herders in school?	35	335	370
Do parents want herders in school?	3	366	369
Do parents prefer children not to herd?	8	361	369
Are there other problems?	3	366	369

14. FEEDING OF SUPPLEMENTAL FEEDS

Section 14 reports on the supplemental feeding of fodder to livestock managed by the households. Two-thirds of the households reported some supplemental feeding, one-third reported no supplemental feeding (table 14.1). Those respondants who did report supplemental feeding were asked to identify the types of fodder fed to seven categories of livestock -- oxen, bulls, lactating cows, other cows, horses, donkeys, and sheep and goats-- to determine if there were any significant differences in the way different categories were managed. It was found that lactating cows and horses were the most commonly fed species; 55.5 percent of the households with lactating cows fed them, while 55.3 percent of the households with horses fed them. Following lactating cows and horses by percentage of animals fed were oxen (52.2 percent), other cows (47.0 percent), bulls (43.9 percent), donkeys (34.4 percent), and sheep and goats (18.4 percent). The most commonly fed types of fodder for all livestock were maize stover, maize stover and weeds, barley and lucerne. Small numbers of households fed wild oats, teff, straw and peas (table 14.2).

Tables 14.3, 14.4 and 14.5 report the numbers of the different categories of animals which were fed fodder, the frequency of feeding, and the number of months animals were fed. A total of 434 oxen, 157 bulls, 460 lactating cows, 585 other cows, 319 horses, 200 donkeys and 1913 sheep and goats were fed. Most of the animals were fed between one and three times per day, and were fed for an average of five to six months of the year. The average number of bundles fed per day per animal fed was 2.9 for oxen, 1.8 for bulls, 2.5 for lactating cows, 3.5 for other cows, 2.4 for horses, 2.2 for donkeys, and 0.08 for sheep and goats (table 14.7).

The most common source of the fodder fed to the animals was own production. A total of 277 English acres and 73 Sesotho acres of fodder were grown by the responding households (table 14.8). Those who purchased fodder utilizied the following outlets: households in the same village, shops including Coop Lesotho outlets, and households in nearby villages (table 14.6).

Besides fodder the most commonly fed supplemental feeds and minerals were salt (fed by 419 households), bran (fed by 62 households), ruminant block (fed by 30 households), dairy meal (fed by 9 households), bone meal (fed by 4 households), and molasses (fed by 1 household). 66 households fed other supplemental feeds and minerals (table 14.9).

Table 14.1: Feeding of Fodder to Livestock (n = 537)

	Yes		No	
	Number of households	% of households	Number of households	% of households
Was fodder fed?	347	66.0	179	34.0

Table 14.2: Type of Fodder Fed

n = 537
no. of HH which fed fodder = 347

Number of households reporting

Type of fodder	Oxen	Bulls	Milking Cows	Other Cows	Horses	Donkeys	Sheep/Goats
Barley	17	14	32	30	54	8	6
Lucerne	5	2	5	5	3	2	1
Maize Stover	89	61	98	89	53	58	26
Sorghum Stover	-	-	-	-	1	-	-
Maize & sorghum stover	3	3	2	1	3	1	1
Weeds	4	2	9	6	3	-	-
Stover & Weeds	31	18	27	21	9	7	1
Lucerne & weeds	1	-	3	2	3	1	-
Maize stover & lucerne	6	5	10	3	3	1	-
Barley & wild oats	1	-	1	1	1	-	1
Wild oats & stover	1	1	-	1	2	2	1
Straw	-	1	-	-	-	1	1
Wild oats	-	1	-	-	1	1	-
Stover & teff	-	-	-	1	-	-	-
Teff	-	-	-	-	1	-	-
Peas	-	-	-	-	-	1	-
Total	164	108	196	166	151	86	40
Total no. of HH which own or manage particular type of animal	314	246	353*		273	250	250**

* Number of HH with cows that have had calves.
** Number of HH with sheep.

Table 14.3: Numbers of Livestock Fed Fodder

n = 537
no. of HH which fed fodder = 347

Number of households reporting

Number of Animals fed	Oxen	Bulls	Milking Cows	Other Cows	Horses	Donkeys	Sheep & Goats
0	54	52	40	57	33	69	120
1	50	78	83	46	75	42	1
2	52	24	48	49	40	16	5
3	23	6	24	25	13	16	1
4	15	2	22	13	7	8	-
5	6	1	7	8	8	1	3
6-10	15	-	10	21	8	4	7
11-20	1	-	1	5	-	1	8
21-30	-	-	-	3	-	-	9
31-40	-	-	-	-	-	-	1
41-50	-	-	-	-	-	-	3
51-100	-	-	-	-	-	-	8
101-200	-	-	-	-	-	-	2
201-300	-	-	-	-	-	-	1
301-400	-	-	-	-	-	-	1
Total HH which fed fodder	162	111	195	170	151	88	50
Total animals	434	157	460	585	319	200	1913
Mean numbers	2.7	1.4	2.4	3.4	2.1	2.3	37.5

Table 14.4: Frequency of Feeding of Livestock

n = 537
no. of HH which fed fodder = 347

Number of households reporting

Frequency	Oxen	Bulls	Milking Cows	Other Cows	Horses	Donkeys	Sheep & Goats
1 time per day	69	53	84	78	56	44	25
2 times per day	70	43	85	65	64	31	17
3 times per day	18	10	15	17	64	8	3
4 times per day	1	1	1	3	1	-	4
8 times per day	-	-	1	-	1	-	-
3 times per week	-	-	-	-	-	-	-
2 times per week	-	1	-	2	1	1	-
every 3 days	-	1	-	1	-	-	-
Total HH	158	109	186	166	187	84	49

Table 14.5: Number of Months Fodder is Fed to Livestock

n = 537
no. of HH which fed fodder = 347

Number of households reporting

Number of Months	Oxen	Bulls	Milking Cows	Other Cows	Horses	Donkeys	Sheep & Goats
1	5	1	2	3	2	2	-
2	4	5	5	5	3	2	1
3	82	52	103	95	68	36	19
4	5	6	8	5	3	3	1
5	-	2	2	1	3	1	1
6	19	12	21	18	18	10	7
7	4	4	4	1	4	2	-
8	1	1	1	1	5	2	-
9	2	1	2	-	2	1	-
10	-	-	-	-	-	-	10
11	-	-	-	-	-	-	-
12	26	16	31	25	31	12	-
Total HH	148	100	179	154	139	71	39
Average number of months	5.1	5.1	5.1	4.8	5.8	5.8	5.4

Table 14.6: Sources of Fodder Fed to Livestock

n = 537
no. of HH which fed fodder = 347

Number of households reporting

Source	Oxen	Bulls	Milking Cows	Other Cows	Horses	Donkeys	Sheep & Goats
Same village	19	11	19	13	12	5	4
Nearby village	3	-	5	3	5	-	1
Shops including Coop Lesotho	7	2	10	6	3	2	2
Grown	125	95	153	134	123	74	40
Village & grown	3	-	4	2	1	1	-
Shops & grown	2	3	1	4	4	1	4
Other	1	-	2	2	2	-	1
Total HH	160	111	194	164	150	81	52

Table 14.7: Number of Bundles of Fodder Fed per Feeding

n = 537

no. of HH which fed fodder = 347

Number of households reporting

Number of Bundles	Oxen	Bulls	Milking Cows	Other Cows	Horses	Donkeys	Sheep & Goats
1	50	56	72	48	62	39	5
2	34	19	34	28	33	18	4
3	21	7	20	18	9	7	1
4	9	4	22	15	5	6	1
5	4	2	6	6	7	-	3
6-10	12	1	7	15	9	2	5
11-15	2	1	3	8	1	2	5
16-20	-	-	-	-	-	-	1
21-25	-	-	-	-	-	-	1
26-30	1	-	-	1	-	-	1
Ave. no. of bundles/animal	2.9	1.8	2.5	3.5	2.4	2.2	8.0

Table 14.8: Acres of Fodder Grown (n = 537)

	Number of households and number of acres						
	0	1	2	3	4-5	>5	Total
Barley:							
English acres - no. HH	19	16	19	7	9	6	
- no. of acres	0	16	38	21	42	68	185
Sesotho acres - no. HH	12	5	5	2	4	4	
No. acres	0	5	10	6	18	31	70
Teff:							
English acres - no. HH	4	1	-	-	-	-	
- no. of acres	0	1	-	-	-	-	1
Oats:							
English acres - no. HH	5	2	1	4	1	3	
- no. of acres	0	2	2	12	5	24	45
Sesotho acres - no. HH	13	1	1	-	-	-	
- no. of acres	0	1	2	-	-	-	3
Other fodder:							
English acres - no. HH	5	2	2	2	1	3	
- no. of acres	0	2	4	6	5	29	46
All fodder:							
English acres - no. acres							277
Sesotho acres - no. acres							73

Table 14.9: Other Minerals Fed to Livestock (n = 537)

Number of households reporting

Response	Ruminant Block	Salt	Bone Meal	Molasses	Dairy Meal	Bran	Other
Yes	30	419	4	1	9	62	66
No	446	55	472	475	467	414	409

15. DISEASE PREVENTION AND CONTROL AND IMPROVED BREEDING

In this section two major elements of livestock management are examined, disease prevention and control, and improved breeding. Data regarding disease prevention and control indicate both the knowledge which the respondants have about animal health, and the steps which they take to ensure the continued good health of their animals. Data on the use of sires of improved breeds of cattle, sheep and goats indicate the committment to upgrading herd quality. Data on who administered treatments, and a direct question regarding assistance received from the Ministry of Agriculture provide insight into the efficacy of the Ministry's field operations and the demand for those operations.

DISEASE PREVENTION AND CONTROL

The respondants specified eight different conditions for which their cattle were treated. The most commonly mentioned condition was anaplasmosis (368 cattle), followed by diarrhoea (146 cattle), ticks (133 cattle), blackleg (103 cattle), mastitis (49 cattle), limp (34 cattle), bot (21 cattle), and strangles (12 cattle). 199 cattle were treated for other conditions. The most common conditions for which sheep and goats were treated were diarrhoea (3477 sheep and 1308 goats) and anaplasmosis (1126 sheep and 458 goats). Less sheep and goats were treated for blackleg, limp, blue tongue, and ticks. Small numbers of horses were treated for bot, strangles, diarrhoea, ticks, African horse sickness, limp and blackleg. The major condition for which donkeys were treated was anaplasmosis (299 donkeys) (table 15.1).

Respondants who mentioned treatments given to their animals were asked to specify the persons who administered the treatments. Of a total of 242 responses to this question, the majority (155) indicated that the livestock manager himself or herself administered the treatments. Ministry of Agriculture employees were also fairly active in the administration of treatments. Livestock Assistants -- resident at Livestock Improvement Centres -- administered 37 treatments, Livestock Attendants -- resident at dip tanks -- administered 12 treatments, and veterinarians -- resident at headquarters in Maseru -- administered 10 treatments. Other people administered the remaining 28 treatments (table 15.2).

The number of households which reported vaccinations of their animals are reported in table 15.3. Those data indicate that cattle receive the most disease prevention care through vaccinations. Of a total of 437 cattle-managing households, 133 vaccinated against black quarter, 13 against blue tongue, 4 against anaplasmosis, and one against an unspecified disease. Far fewer households reported vaccinations for other livestock species. A total of 17 households vaccinated both sheep and goats, 13 vaccinated horses, and 5 vaccinated donkeys.

Dipping, the widely recommended method to control small stock parasites, was practiced by a majority, but not all, managers of small stock. Of 250 sheep-managing households, 178 or 71.2 percent reported dipping their animals once, and 160 of those reported a second dipping. However, those households which did not choose to dip appear to generally be owners of relatively few sheep. Of a total of 13654 sheep managed, 9218

or 67.5 percent were reported to have been dipped once and 9068 were dipped twice by 163 and 138 respondants respectively (tables 15.4 and 15.5). These data may indicate generally lower management levels for smaller flocks, or the results of decisions comparing the benefits and costs of dipping. The trekking costs per animal to move sheep flocks to the dip tanks likely decline as the number of animals trekked increases.

Identical numbers of households reported first (178) and second (160) dipping of goats suggesting that the same households which reported dipping sheep also dipped their goats. A lower percentage of goats than sheep were reported dipped, however. Of a total of 8088 goats, only 4789 (59.2 percent) were dipped once, and 4568 (56.5 percent) twice (table 15.7). These data indicate that, unlike sheep-holding households, several of the large goat-holding households choose not to dip their goats.

USE OF 'IMPROVED' SIRES AND ARTIFICIAL INSEMINATION

Another key element of livestock management relates to efforts taken by the households to upgrade their herds through breeding females to 'improved' sires. 'Improved' is generally used to refer to animals which are of superior genetic stock to the average mixed-breed cattle, sheep and goats. For sheep and goats breed upgrading implies the use of pure bred, or near pure bred, merino rams and angora bucks for breeding mixed-breed ewes and does. More, and higher quality, wool and mohair are the expected results. The genetic stock of cattle herds is upgraded through breeding cows to Friessen, Brown Swiss, Jersey, Afrikaaner, or Drakensburger bulls. Jerseys are generally noted to be small, high milk producers which calve easily. Friessens have relatively large frames and the potential to produce the largest possible amounts of milk under optimal feeding and management conditions. Brown Swiss are noted to be good tri-purpose animals; under proper management they are good producers of milk, meat and draught power. With their large and powerful frames, Afrikaaner and Drakensburger are good meat and draught animals.

Respondants which indicated the use of improved bulls used Friessen, Brown Swiss, Jersey, Friessen/Brown Swiss cross, and Herefords. Out of 27 cases, 11 reported that the bulls were owned, 9 reported that the bulls were rented, and 7 reported that the bulls were borrowed. Four of the bulls were obtained through the Ministry of Agriculture, 3 from South African sellers, 3 from elsewhere in Lesotho, and 2 from other sources. The remainder were obtained within the same village. Rental prices per cow bred ranged from two maloti to twenty maloti, with the mode rental price being ten maloti (table 15.9).

Most of the improved rams were merinos owned by the households. Half of the rams were purchased through the Ministry of Agriculture. The average purchase price ranged from M100 to M290, with a mean of M144.80. Two-thirds of the angora billies were owned by the households. The average purchase price was M111.50.

ASSISTANCE RECEIVED FROM THE MINISTRY OF AGRICULTURE

Data presented previously indicate that a large number, perhaps a majority, of the households interviewed had some contact with Ministry of

Agriculture personnel during the year. In section 9 it was shown that the most popular marketing channel for both wool and mohair was through the Livestock Products Marketing Service which operates under the Ministry of Agriculture. In tables 15.4, 15.5, 15.6 and 15.7 it was reported that the majority of sheep and goat owners dip their animals, this done at dip tanks operated by Livestock Attendants who are employees of the Livestock Division of the Ministry of Agriculture. Data on tables 15.10 and 15.11 indicate that a few of the households attained improved rams and billies through the Ministry of Agriculture. Data on table 15.12 indicate that a number of the households received other assistance from the Ministry. Besides the assistance with disease prevention and control which has been previously reported in this section, table 15.12 reveals other assistance received from the respondants to be: advice on herd improvement (9), advice on livestock production (8), and removal of retained placenta (2).

Table 15.1: Number of animals treated for specified conditions (n = 537)

Condition	Number of animals				
	No. of cattle	No. of sheep	No. of goats	No. of horses	No. of donkeys
Ticks	133	29	38	15	5
Strangles	12	-	-	36	14
Bot. Papisi	21	2	15	47	16
Anaplasmosis	368	1126	458	-	299
Blackleg	103	143	55	3	1
Diarrhoea	146	3477	1308	21	11
Limp	34	62	15	4	3
Mastitis	49	-	-	-	-
Blue tongue	-	18	25	-	-
African horse sickness	-	-	-	6	3
Other	199	-	-	-	-
Total treatments	1065	4857	1914	132	357

Table 15.2: Persons who administered treatments (n = 537)

Condition	Number of households				
	Self	Livestock attendant	Livestock assistant	Veterinarian	Other
Ticks	16	4	5	2	1
Strangles	8	1	3	1	2
Bot. Papisi	15	1	4	1	1
Anaplasmosis	52	-	10	3	9
Blackleg	6	1	4	1	2
Diarrhoea	39	3	4	-	7
Limp	5	-	1	-	2
Mastitis	1	-	-	-	1
Blue tongue	1	-	-	-	-
African horse sickness	-	-	1	1	-
Other	12	2	5	1	3
Total treatments	155	12	37	10	28

Table 15.3: Livestock Vaccinations reported (n = 536)

	Number of households				
	Cattle	Sheep	Goats	Horses	Donkeys
Blue Tongue	13	9	7	1	1
Black Quarter	133	4	6	8	2
Anaplasmosis	4	-	-	-	-
Interoxaemia	-	2	2	-	-
Horse sickness	-	-	-	2	1
Strangles	-	-	-	2	-
Other	1	-	-	-	-
Unknown	-	2	2	-	1
Total vaccinations	151	17	17	13	5

Table 15.4: Sheep Dipping by months (n = 536)

	First Dip		Second Dip	
Month	No. of households	% of households	No. of households	% of households
January	25	14.0	8	5.0
February	62	34.8	50	31.3
March	34	19.1	45	28.1
April	8	4.5	13	8.1
May	3	1.7	2	1.3
June	1	0.6	1	0.6
July	-	-	-	-
August	1	0.6	1	0.6
September	2	1.1	-	-
October	2	1.1	-	-
November	5	2.8	1	0.6
December	3	1.7	1	0.6
Didn't Dip	29	16.3	36	22.5
Not indicated	3	1.7	2	1.3
Total responses	178	100.0	160	100.0

Table 15.5: Number of Sheep Dipped (n = 536)

Number of Sheep	First Dip		Second Dip	
	No. of households	no. of sheep	No. of households	no. of sheep
1-5	27	87	17	52
6-10	30	235	23	182
11-20	33	500	26	417
21-50	38	1358	34	1239
51-100	14	1133	16	1289
101-200	12	1792	11	1672
201-300	4	1265	5	965
301-400	-	-	-	-
> 400	5	2848	6	3252
Total	163	9218	138	9068

Table 15.6: Goat Dipping by month (n = 536)

	First Dip		Second Dip	
	No. of households	% of households	No. of households	% of households
January	21	13.6	9	6.5
February	57	37.0	42	30.2
March	27	17.5	37	26.6
April	9	5.8	12	8.6
May	4	2.6	2	1.4
June	1	0.6	2	1.4
July	-	-	-	-
August	1	0.6	2	1.4
September	1	0.6	-	-
October	2	1.3	-	-
November	6	3.9	1	0.7
December	2	1.3	2	1.4
Didn't Dip	23	14.9	28	20.1
Not indicated	-	-	2	1.4
Total responses	178	100.0	160	100.0

Table 15.7: Number of Goats Dipped (n = 536)

Number of Goats	First Dip		Second Dip	
	No. of households	No. of goats	No. of households	No. of goats
1-5	25	91	19	66
6-10	33	267	29	235
11-20	32	502	24	353
21-50	29	982	26	886
51-100	14	1020	16	1190
101-200	9	1269	10	1180
201-300	2	658	3	658
301-400	-	-	-	-
> 400	-	-	-	-
Total	145	4789	126	4568

Table 15.8: Number of HH reporting improved breeding or use of artificial insemination (n = 536)

	Number of households
Use of improved sires	44
Use of artificial insemination	1

Table 15.9: Source, Reason for use, and price of improved bulls (n = 536)

	No.of HH reporting	% of HH reporting
Breeds		
Friesland	9	45.0
Brown Swiss	7	35.0
Jersey	2	10.0
Friesland/Swiss	1	5.0
Hereford	1	5.0
Total	20	100.0
Ownership		
Owned	11	40.7
Borrowed	7	25.9
Rented	9	33.3
Total	27	99.9
Source		
Same Village	13	52.0
Elsewhere Lesotho	3	12.0
RSA	3	12.0
Govt/Livestock Centre	4	16.0
Other	2	8.0
Total	25	100
Reason for use		
Upgrade Herd	11	68.8
Good Breed	1	6.3
Get Purebred	3	18.8
Want Cow to conceive	1	6.3
Total	16	100.0
Purchase Price		
M 140	1	25.0
M 400	2	50.0
M 500	1	25.0
Total	4	100.0
Rental Price		
M 2	1	8.3
M 5	2	16.7
M 6	2	16.7
M 10	6	50.0
M 20	1	8.3
Total	12	100.0

Table 15.10: Breed, Ownership, Source, Reason for use and Price of Improved Sheep/Ram (n = 536)

	No. of households	% of households
Breed		
Merino	10	90.0
Other	1	9.1
Total	11	100.0
Ownership		
Owned	13	86.7
Borrowed	2	13.3
Total	15	100.0
Source		
Same Village	2	14.3
Elsewhere Lesotho	3	21.4
RSA	2	14.3
Govt/Livestock Centre	7	50.0
Total	14	100.0
Reason for use		
Mine	1	11.1
Improved Breed	2	22.2
Upgrade Herd	6	66.7
Total	9	100.0
Price		
M 100	1	10.0
M 120	3	30.0
M 128	1	10.0
M 130	1	10.0
M 140	2	20.0
M 160	1	10.0
M 290	1	10.0
Total	10	100.0
Mean	144.80	

Table 15.11: Breed, Ownership, Source, Reason for use and Price of Improved Billy Goat (n = 536)

	No. of households	% of households
Ownership		
Owned	8	66.7
Borrowed	4	33.3
Total	12	100.0
Source		
Same Village	5	45.5
Elsewhere Lesotho	2	18.2
Govt/Livestock Centre	4	36.4
Total	11	100.0
Reason for use		
Improved Breed	1	20.0
Upgrade Herd	4	80.0
Total	5	100.0
Price		
M 60	1	20.0
M 100	1	20.0
M 126	1	20.0
M 160	1	20.0
Exchanged for another	1	20.0
Total	5	100.0
Mean purchase price	111.50	

Table 15.12: Assistance received from Ministry of Agriculture (n = 536)

	number of households	
Type of assistance	Livestock Assistant	Livestock Specialist
Vaccination or drenching	31	11
Advice on herd improvement	9	4
Treatment of disease	37	14
Advice on livestock production	8	1
Removal of retained placenta	2	-
Dipping 2	2	
Other 4	5	
Total 93	37	

16. GRAZING IN VILLAGE AREAS AND AT CATTLE POSTS

The expansion of arable agriculture in lowland Lesotho, the fixing of the present-day boundaries with the Treaty of Aliwal North, and the adoption of merino sheep and angora goats, all contributed to the expansion of the Basotho nation into the mountaineous areas of Lesotho in the late 19th century. This expansion took two forms: (1) permament settlements were established in the mountain valleys formed by the Senqu River and its tributories; and (2) cattle posts and the system of winter--summer transhumance of livestock were established as the dominant form of grazing management.

Under traditional Basotho land tenure all land is owned by the Basotho nation and is held in trust by the King. Under this system no land is actually 'owned' by private individuals, but alternative bundles of usufruct rights are bestowed upon individuals by chiefs, committees, and government institutions delegated by the King through the legal system. Local village chiefs, village land allocation committees, and since the 1979 Land Act, The Ministry of Interior and the Commission of Lands, are involved in administering the granting of usufruct rights to arable land. Households, generally through their adult male members, are granted exclusive rights to construct shelter and crop arable land, provided they adhere to a number of regulations and restrictions. After crops are harvested, however, arable land is generally considered to be communal property and free to be grazed by livestock owned by any household in the community.

Grazing land in village areas is also shared communally by member households of the villages. Access to this land is controlled by village chiefs through leboella which is meant to protect certain areas from overgrazing through enforcement of a system of rotational grazing.
Cattle post grazing land, most of which is located in the mountains, has traditionally been considered to be a communal resource open to all members of the Basotho nation. However, ward chiefs are charged with regulating access to cattle post grazing in their jurisdictions through the issuance of grazing permits which specify the numbers of animals which individuals may take to the cattle posts and the period during which cattle post grazing is allowed. Ward chiefs are assisted in this regulatory function by Range Technical Officers (employees of the Range Management Division of the Ministry of Agriculture), and are empowered by such laws as the Grazing Control Regulations of 1980.

In this section a series of tables are presented which contain data relevant for determining how this set of traditions and regulations now affect access to the available grazing resources. Three different management regimes are identified. First, there are those households which continue the traditional practice of rotating animals from village grazing areas in the winter to cattle post grazing areas in the summer. Second, an increasing number of households are keeping their animals in the village grazing area throughout the year. Third, there are a small number of households which feed their animals in confinement (drylot) throughout the year. Attitudes toward grazing constraints are also reported.

Tables 16.1 to 16.5 report data solicited from households which kept

animals in drylot or village grazing areas throughout the year. Of the 437 cattle-managing households, 4.3 percent reported some drylot cattle and 95.0 percent reported some cattle left in the village grazing area throughout the year. Of the total cattle herd of 3447, 2.2 percent were drylotted, and 77.6 percent were village grazed throughout the year. Lower percentages were reported for small stock drylotted and village grazed throughout the year. Five households reported keeping 70 sheep in drylot and only one household reported five drylotted goats. 49.2 percent of the 13654 sheep and 33.0 percent of the 8088 goats were kept in village grazing throughout the year by 131 and 121 sheep- and goat-managing households. Statistics for horses and donkeys are as follows: 13 households drylotted 79 horses and 4 households drylotted 6 donkeys; 122 households kept 278 horses (43.2 percent of the total horse population) and 84 households kept 181 horses (29.3 percent of the total donkey population) in the village grazing areas throughout the year.

Respondants who reported keeping animals in drylot or village grazing areas throughout the year were asked why they followed those practices. Tables 16.6 to 16.15 summarize the data collected. Of twenty households which gave reasons for drylotting cattle, 13 indicated lack of resources, either lack of grazing area (4) or lack of shepherds (9). Four households indicated that the animals could be kept in better condition, either for draught or for milk production. Two households reported that they could afford to drylot and one reported that they were protecting the animals from theft. One household reported keeping sheep in drylot because they had lambs, and another reported keeping goats in drylot because of a lack of shepherds. Similar reasons were reported for keeping horses and donkeys in drylot.

Reasons reported for keeping livestock in village grazing areas throughout the year were very similar for all species so only cattle are reviewed specifically. 52 households indicated that they would prefer to keep the animals in drylot but either cannot afford to (31) or have no fodder (21); 16 households reported that they have no access to cattle posts grazing; 23 households reported that they had no shepherds or that the cost of hiring shepherds was not justified by the number of animals which they owned; 27 households indicated that the village grazing area was of equal or greater quality than the cattle post grazing; 14 households reported that they wanted the cattle kept close by the household so they would be available to supply milk (10), draught (3), or transport (1); 46 households indicated that the village grazing area was their designated grazing area; and 4 households indicated that they animals were not fit for going to the cattle post. Reasons given for keeping sheep and goats in the village grazing area throughout the year were very similar.

Tables 16.16 to 16.21 provide data on the grazing of cattle, sheep and goats in summer and winter cattle post grazing areas. Of the 437 cattle-managing households, 244 or 55.8 percent reported taking 1851 cattle to summer grazing areas and 76 or 17.4 percent reported taking 630 cattle to the winter grazing areas. The total of the number taken to the summer cattle posts, and the number reported to have been number grazed in the village grazing area throughout the year, is 4525. This indicates a double counting of 1078 animals (the total adult cattle population is 3447). The number of sheep and goats taken to the summer cattle posts was 14127, 65.0

percent of the total small stock population of 21742. 382 sheep and goats were double counted.

Most of the respondants reported their cattle post grazing areas, both summer and winter, were approximately two to three days (24 hours) trek from their villages. Animals were taken to the summer cattle posts over a surprisingly long period. Roughly equal numbers of households reported taking their cattle, sheep and goats to the cattle posts in the months of October, November, December and January. The return trek from the cattle posts were more concentrated, with most households reported return dates in April and May.

An important factor affecting utilization of cattle post grazing is the households' access to kraals and shepherd huts. At the summer range, 237 households had access to cattle kraals and 177 households had access to sheep and goat kraals. Approximately 60 percent of the kraals were owned outright by the reporting households, with 40 percent of the kraals shared with other livestock owners. Shepherd huts were shared by more than half of the households reporting access to summer range. Sharing of kraals and huts was less common amongst households who took their animals to winter range, and least common for kraals in the village area.

Respondants were asked a series of questions designed to assess their attitudes toward the range, and their appreciation of any problems which might exist with current range utilization practices. Peoples' attitudes will be key to any future initiatives taken to alleviate the overgrazing problems.

First, respondants were asked if they would judge current grazing as adequate or inadequate. The majority of the households answering this question indicated that they thought that current grazing was adequate, 61.3 percent thought that summer grazing was adequate, 56.8 percent thought that winter cattle post grazing was adequate, and 69.6 percent thought that winter village grazing was adequate (table 16.22). Next the respondants were asked if there were any problems associated with the use of grazing lands. While significant numbers of households reported problems with all three grazing areas, most indicated no problems with use of summer and winter grazing, and more indicated problems with local village grazing. Those respondants that did indicate problems were asked what those problems were and how they thought the problems might be solved. For the local village grazing lands, the most common problems cited were: no range (62), reserved pastures (39), lack of reserved pastures (13), and ploughed fields (11). Proposed solutions to those problems included: take animals to summer grazing areas (17), supplement feed (16), reduce the number of animals (14), reserve grazing area (10), and feed animals in confinement (9).

No range was also the most commonly cited problem related to summer cattle post grazing land (39). Other problems were: too many animals (17), reserved pastures (12), fields are all ploughed (5), theft (4) and drought (4). Two households were apparently adversely affected by the Sehlabathebe Range Management Project. Many of the solutions proposed to alleviate problems associated with summer range were related to allocation of grazing rights -- reduce the number of animals (10), grazer reserved range (6),

prohibit outsiders from grazing (3), more land for grazing animals (3), and government intervention (1). Other solutions were supplemental feed (10), keep up grazing areas (4), and prosecute thieves (2).

Only 28 households reported problems related to winter grazing land. The most common problem was not enough range. The most common solutions were improve pastures, reduce the number of animals, and grow fodder.

Table 16.1: Cattle in Drylot or Village Grazing throughout the year

n = 536

no. of cattle managers = 437

	Drylot		Village Area	
Number of Cattle	Number of households	Number of cattle	Number of households	Number of Cattle
1	5	5	35	35
2	6	12	37	74
3	-	-	48	144
4	2	8	42	168
5	1	5	20	100
6	1	6	25	150
7	-	-	126	882
8	-	-	20	160
9	1	9	8	72
10	1	10	13	130
11-15	2	22	20	252
16-20	-	-	13	238
21-30	-	-	5	124
>30	-	-	3	145
Totals	19	77	415	2674

Table 16.2: Sheep Kept in Drylot or Grazed in Village Area Year Round

n = 536

no. of sheep managers = 250

	Drylot		Village Area	
Number of Sheep	No. of households	No. of sheep	No. of households	No. of sheep
1	1	1	3	3
2	-	-	7	14
3	1	3	10	30
4	-	-	5	20
5-10	1	8	33	230
11-20	-	-	24	352
21-50	2	58	24	842
51-100	-	-	10	738
101-200	-	-	7	1196
201-300	-	-	4	975
301-400	-	-	-	-
401-500	-	-	2	923
501-600	-	-	-	-
> 600	-	-	2	1430
Total	5	70	131	5323

Table 16.3: Goats Kept in Drylot or Grazed in Village Area Year Round

n = 536
no. of goat managers = 235

	Drylot		Village Area	
	No. of households	No. of goats	No. of households	No. of goats
1	-	-	7	7
2	-	-	6	12
3	-	-	10	30
4	-	-	4	16
5-10	1	5	39	290
11-20	-	-	22	330
21-50	-	-	19	663
51-100	-	-	10	728
101-200	-	-	3	378
201-300	-	-	1	215
301-400	-	-	-	-
401-500	-	-	-	-
501-600	-	-	-	-
> 600	-	-	-	-
Total	1	5	121	2669

Table 16.4: Horses Kept in Drylot or Village Grazing

n = 536
no. of horse managers = 273

	Drylot		Village Area	
Number of Horses	No. of households	No. of horses	No. of households	No. of horses
1	7	7	57	57
2	3	6	30	60
3	-	-	19	38
4	-	-	-	-
5	-	-	7	35
6	-	-	2	12
7	-	-	-	-
8	1	8	1	8
9	-	-	2	18
10	-	-	2	20
11	-	-	-	-
12	-	-	1	12
18	-	-	1	18
29	2	58	-	-
Total	13	79	122	278

Table 16.5: Donkeys Kept in Drylot or Village Grazing

n = 536
no. of donkey managers = 250

Number of Donkeys	Drylot		Village Area	
	households	donkeys	households	donkeys
1	3	3	42	42
2	-	-	13	26
3	1	3	21	63
4	-	-	-	-
5	-	-	1	5
6	-	-	5	30
7	-	-	1	7
8	-	-	1	8
Total	4	6	84	181

Table 16.6: Reasons for Keeping Cattle in Drylot

n = 536
HH with drylot cattle = 19

Reasons	No. of households	% of households
No grazing area	4	20.0
No shepherds	9	45.0
Improve condition	2	10.0
Can afford it	2	10.0
Afraid of theft	1	5.0
To be available for draught	1	5.0
Milk production maintanance	1	5.0
Total responses	20	100.0

Table 16.7: Reasons for Keeping Cattle in Village Grazing

n = 536
HH with village grazed cattle = 415

Reasons	No. of households	% of households
Grazing area reserved	10	5.0
To fatten them	13	6.5
Cow is milked	10	5.0
Our area for grazing	27	13.6
Winter grazing	19	9.5
Can't afford drylot	31	15.6
Available for transport	1	0.5
Not spend money	1	0.5
Sick cows	2	1.0
Sick calves	1	0.5
Too few animals	8	4.0
No fodder	21	10.6
No shepherds	21	10.6
Best feeding	8	4.0
Mixed breed	1	0.5
Have shepherds	6	3.0
Tough breed	1	0.5
Pastures not reserved	2	1.0
Available for draught	3	1.5
No space at cattlepost	1	0.5
Enough grass	6	3.0
It is the only animal	1	0.5
Range not enough	3	1.5
Are for mafisa	1	0.5
Don't know - feed problem	1	0.5
Total responses	199	99.9

Table 16.8: Reasons for Keeping Sheep in Drylot

n = 536
HH with drylot sheep = 5

Reasons	No. of households	% of households
Have lambs	1	100
Total	1	100

Table 16.9: Reasons for Keeping Sheep in Village Grazing

n = 536
HH with village grazed sheep = 131

Reason	No. of households	% of households
Can't afford fodder	17	24.3
No fodder fields	6	8.6
Rough grass	5	7.1
No shepherds	5	7.1
Best feeding	7	10.0
Coloured wool not allowed	1	1.4
Sick	1	1.4
It is our grazing area	9	12.9
Cold is summer grazing	7	10.0
To control breeding	2	2.9
Cattle post area reserved	8	11.4
I have shepherds	1	1.4
Are mafisad in	1	1.4
Total	70	99.9

Table 16.10: Reasons for Keeping Goats in Drylot

n = 536
HH with drylot goats = 1

Reasons	No. of households	% of households
No shepherd	1	100

Table 16.11: Reasons for Keeping Goats in Village Grazing

n = 536
HH with village grazed goats = 114

Reason	No. of households	% of households
Can't afford dry lot	17	25.4
Rough grass	2	2.9
No shepherds	4	5.9
Best feeding	9	13.4
It is our grazing area	14	20.9
Cold summer grazing	4	5.9
They are few	1	1.5
I have shepherds	3	4.5
Are borrowed	1	1.5
Total	55	100.1

Table 16.12: Reasons for Keeping Horses in Drylot

n = 536
HH with drylot horses = 13

Reasons	No. of households	% of households
Use all the time	3	33.3
No shepherds	1	11.1
Enough feed	2	22.2
Supplemented feed	1	11.1
Improve condition	1	11.1
Not enough grass	1	11.1
Total	9	99.9

Table 16.13: Reasons for Keeping Horses in Village Grazing

n = 536
HH with village grazed horses = 122

Reasons	No. of households	% of households
Can't afford fodder	19	28.8
Supplemental feeding	8	12.1
Where they graze	12	18.2
No shepherd	7	10.6
No summer grazing area	2	3.0
Available for transport	10	15.2
Grazing area reserved	8	12.1
Total	66	100.0

Table 16.14: Reasons for Keeping Donkeys in Drylot

n = 536
HH with drylot donkeys = 4

Reasons	No. of households	% of households
No shepherds	3	100
Total	3	100

Table 16.15: Reasons for Keeping Donkeys in Village Grazing

n = 536
HH with village grazed donkeys = 84

Reasons	No. of households	% of households
Can't afford fodder	24	48.0
No shepherds	9	18.0
Keep for transport	5	10.0
Summer pastures reserved	6	12.0
Have shepherds	2	4.0
Few animals	2	4.0
Enough grass	2	4.0
Total	50	100.0

Table 16.16: Number of Cattle Grazed in Summer and Winter Grazing Areas

n = 536
no. of cattle managers = 437

Number of Cattle	Summer Grazing Area		Winter Grazing Area	
	Number of households	Number of cattle	Number of households	Number of cattle
1-5	111	359	31	89
6-10	84	653	26	189
11-20	38	550	14	182
21-30	10	252	3	77
31-40	1	37	1	40
41-50	-	-	-	-
>50	-	-	1	53
Total	244	1851	76	630

Table 16.17: Number of Sheep and Goats Grazed in Summer and Winter Grazing Areas

n = 536
no. of sheep managers = 250
no. of goat managers = 235

Number of Sheep & goats	Summer Grazing Area		Winter Grazing Area	
	Number of households	Number of sheep & goats	Number of households	Number of sheep & goats
1-5	14	56	4	22
6-10	28	228	9	72
11-20	35	549	9	136
21-50	35	1171	12	414
51-100	25	1735	10	728
101-200	17	2523	5	727
20-500	14	3578	6	1512
>500	6	4287	2	1435
Total	174	14127	83	5076

Table 16.18: Travel time to Summer and Winter Ranges (n = 536)

Number of households

Number of Hours	Summer Range		Winter Range	
	Cattle	Sheep/Goats	Cattle	Sheep/Goats
1	11	10	8	8
2	11	8	4	1
3	8	6	1	1
4	4	2	2	2
5	1	1	-	-
6	1	1	1	-
7	-	-	1	-
8	1	1	-	-
10	-	-	-	1
12	18	14	2	1
24	137	102	25	19
36	2	1	-	-
48	16	11	3	3
72	6	3	2	1
92	2	2	2	1
96	4	1	1	-
Total	222	163	52	39
Mean	24.5	23.0	23.7	23.0

Table 16.19: Month Livestock taken to Summer Range (n = 536)

Month	Cattle		Sheep and Goats	
	No. HH	% HH	No. HH	% HH
January	54	23.8	34	21.5
February	21	9.3	15	9.5
March	4	1.8	4	2.5
April	1	0.4	1	0.6
May	-	-	-	-
June	-	-	-	-
July	1	0.4	1	0.6
August	2	0.9	3	1.9
September	11	4.8	12	7.6
October	48	21.1	33	20.9
November	34	15.0	19	12.0
December	47	20.7	28	17.7
All year summer range	4	0.7	8	5.1
Total	227	98.6	158	99.9

Table 16.20: Month Livestock return from Summer Range (n = 536)

Month	Cattle		Sheep and Goats	
	No. HH	% HH	No. HH	% HH
January	-	-	1	0.6
February	4	1.8	4	2.5
March	24	10.9	7	4.5
April	70	31.8	45	28.7
May	97	44.1	72	45.9
June	13	5.9	13	8.3
July	5	2.3	3	1.9
August	1	0.5	3	1.9
December	1	0.5	-	-
All year summer range	5	2.3	9	5.7
Total	220	100.1	157	100.0

Table 16.21: Ownership of Kraals and Huts (n = 536)

	Own		Share		
	No. HH	% HH	No. HH	% HH	Total HH
Summer range					
Cattle kraal	138	58.2	99	41.8	237
Sheep/goat kraal	111	62.7	66	37.3	177
Shepherd hut, cattle	103	44.8	127	55.2	230
Shepherd hut, sheep/goats	86	49.7	87	50.3	173
Winter range					
Cattle kraal	64	83.1	13	16.9	77
Sheep/goat kraal	47	81.0	11	19.0	58
Shepherd hut, cattle	48	66.7	24	33.3	72
Shepherd hut, sheep/goats	38	67.9	18	32.1	56
Village					
Cattle kraal	284	88.2	38	11.8	322
Sheep/goat kraal	175	89.7	20	10.3	195

Table 16.22: Adequacy of Seasonal Grazing (n = 536)

Season or location	Adequate		Inadequate		
	No. HH	% HH	No. HH	% HH	Total HH
Summer Grazing	204	61.3	129	38.7	333
Winter Grazing	138	56.8	105	43.2	243
Winter in Village	250	69.6	109	30.4	359

Table 16.23: Problems Encountered with Seasonal Grazing (n = 536)

Season or location	Are Problems No. HH	Are Problems % HH	No Problems No. HH	No Problems % HH	Total HH
Winter range	31	11.3	243	88.7	274
Summer range	90	26.5	249	73.2	339
Local grazing	162	41.1	232	58.9	394

Table 16.24: Problems related to Local Grazing (n = 537)

Problem	No. of households	% of households
Too many animals	7	4.5
No range	62	39.7
Reserved pastures	39	25.0
Ploughed fields	11	7.1
Sending to summer range	3	1.9
No water	5	3.2
Have to buy feed	2	1.3
Balisa ba utsoisa	4	2.6
Poor range management	4	2.6
No grass - summer	1	0.6
Animals travel too far	1	0.6
People with stover graze on others' fields	1	0.6
No reserved pastures	13	8.3
Tree planting	3	1.9
Total	156	99.9

Table 16.25: Solutions Proposed for local Grazing Problems (n = 536)

Solution	No. of households	% of households
Taken to summer grazing area	17	16.0
Reserve grazing area	10	9.4
Increase grazing area	6	5.7
Animals graze on reserved pasture	4	3.8
Reduce animals	14	13.2
Stop planting trees on pastures	1	0.9
Feed on drylot	9	8.5
Herders be disciplined	2	1.9
Supplement feed	16	14.8
Rain to fall	7	6.6
None	4	3.8
Range management	4	3.8
Fence fields	1	0.9
Grow fodder	7	6.6
Rotational grazing	1	0.9
Stay in grazing area all the time	1	0.9
Other solutions	3	2.9
Total	103	100.6

Table 16.26: Specific Problems Related to Grazing in Summer Range (n = 536)

Problem	No. of households	% of households
Too many animals	17	19.5
Fields all ploughed	5	5.7
No range	39	44.8
Animals emaciated	1	1.1
Reserve pastures	12	13.8
Expense of paying herders	1	1.1
Theft	4	4.6
Grazing on steep slopes	2	2.3
Drought	4	4.6
LCRD taken land	1	1.1
Penalty given for grazing in LCRD area	1	1.1
Total	87	99.7

Table 16.27: Solutions Proposed for Summer Range Problems (n = 536)

Solution	No. of households	% of households
Graze reserved range	6	11.8
Reduce animals	10	19.6
No solution	5	9.8
No outsiders	3	5.9
Supplement feed	10	19.6
Keep up grazing areas	4	7.8
Prosecute thieves	2	4.0
Properly allocate rangeland	1	2.0
Government intervention	1	2.0
Mafisa out	1	2.0
More land	3	5.9
Rain to fall	1	2.0
LCRD should allow grazing	2	3.9
LCRD area be fenced	1	2.0
Total	51	100.2

Table 16.28: Specific Problems Related to Grazing in Winter Range (n = 536)

Problem	No. of households	% of households
Chief allocated small area	1	3.6
Not enough range	19	67.9
Trees are planted on range	2	7.1
Cold and snow	2	7.1
Reserved pastures	3	10.7
Trespassing on others fields	1	3.6
Total	28	100.0

Table 16.29: Solutions Proposed for Winter Range Problems (n = 536)

Solution	No. of households	% of households
Improve pastures	4	21.1
None	3	15.8
Reduce number of animals	4	21.1
Allow to graze crop leftovers	1	5.3
Grow fodder	4	21.1
Rain to fall	1	5.3
Take to summer area	1	5.3
Graze animals together	1	5.3
Total	19	100.3

17. HOUSEHOLD INVOLVEMENT AND ATTITUDES REGARDING BOHALI PAYMENTS

In section 7 of this report the importance of slaughtering livestock in connection with certain ceremonies -- weddings, funerals, welcome baby parties, initiation ceremonies, appeasement of balimo -- was illustrated. In this section, another important social demand for livestock, for meeting bridewealth payments (bohali or lobola), is reviewed. Household involvement in, and attitudes toward these payments is examined.

HOUSEHOLD INVOVLEMENT IN BOHALI PAYMENTS

As bohali payments are relatively infrequent large transactions, respondants were asked to give details about each payment which they recall the household being involved in, either on the giving or receiving end of the transaction. Of the 537 households, 392 could recall at least one payment, 93 could recall two payments, 35 could recall three payments, and 17 could recall four payments for a total of 537 payments. Of these 537 payments (coincidentally equal to the total number of households interviewed) information on the year of the payment was collected for 355 payments. Most of these occurred within the ten year period 1976 to 1985 and smaller numbers occurred in the previous four decades. 69 payments were reported to have occurred during 1984 or 1985. The relationship between the household head (usually male) and the bride or groom married is given in table 17.2. Besides the mothers and fathers of the brides and grooms, other relatives including brothers and uncles were often involved.

Traditionally, bohali payments in Lesotho were negotiated in terms of cows, with the normal payment being twenty cows. In more recent days, however, other livestock, as well as cash, have become more important mediums of payment. For this reason respondants were asked to specify the number of cattle, sheep, goats, horses and donkeys, as well as the amount of cash which was involved in each bohali payment. The magnitude of bohali payments means that few grooms with their families can meet the total negotiated payment at the time of the wedding. It is normal for the two households involved to agree on some initial transfer at the time of the wedding that will be followed by a series of secondary payments after the wedding. Ancedotal evidence indicates that many bohali transactions are never actually completed. In tables 17.3 to 17.8 the numbers of livestock and cash involved in all reported bohali payments are reported. Besides the total negotiated payment, the amounts of initial and secondary payments are indicated. Respondants were also asked to indicate their share of the payments as a number of households are often involved.

A total of 451 of the 537 bohali payments involved cattle. The average first payment was 8.9 cattle, the average second payment was 10.6, and the average household share of the total payment was 9.9. Much smaller numbers of bohali payments involved sheep or goats. Of the 18 payments which involved sheep the average first payment was 22.6 sheep and the average second payment was 11.7. 17 payments involved goats with an average first payment of 11.6 goats and an average second payment of 9.6 goats. Horses were involved in 32 payments -- the average first payment was 1.4 horses. Donkeys were involved in 16 payments with the average first payment being 1.6 donkeys. After cattle the most important medium for bohali exchanges was cash. A total of 113 payments were made at least

partially involving cash, with an average first payment of M446.95.

ATTITUDES TOWARD BOHALI PAYMENTS

A series of questions were asked to solicit some of the attitudes which the respondants have towards bohali payments. First, the respondants were asked to rank their preference for different forms of bohali payments for both giving and receiving. Second, the number of different types of livestock or cash the respondants would prefer in place of one cow in bohali payments was asked. Third, respondants were asked if the form or the amount of bohali payments were changing over time, and if so, why.

Rankings of the preferred forms were remarkably similar for both giving and receiving, with cattle ranked first, cash second, sheep third, goats fourth, horses fifth, and donkeys sixth (tables 17.9 and 17.10). In terms of the numbers preferred to one cow, all types of cattle, horses and donkeys appear to be relatively interchangable, with most respondants indicating that one of each oxen, bulls, horses and donkeys would be preferred to one cow. Sheep and goat exchange rates were found to be much more variable with respondants indicating between 2 and 20 sheep or goats preferred to one cow. The mean exchange was 6.1 to 1 for both sheep and goats. Cash payments preferrd to one cow also varied a great deal from household to household. Sixteen households preferred cash payments of less than M50 rather than one cow, while 7 households preferred cash payments of between M451 and M500. The mean amount of cash preferred to one cow was M190.30 (tables 17.11 and 17.12).

Asked if the form of bohali payments was changing over time, 396 respondants answered yes, with the concensus being that livestock were becoming less important due to a lack of animals, and cash was becoming more important. Asked if the amounts were changing, 238 indicated that the amounts were increasing, 57 indicated the amounts were decreasing, and 211 thought the amounts were staying about the same. Most popular reasons for increased payments were rising cattle prices, general inflation, and increased cost of living. The most popular reason for decreased payments was that the total bohali payment is less frequently made now. Other reasons were lack of livestock, marriage has lost meaning, and the cash rate is lower than the livestock rate. Almost all of those who indicated no change in the amount of payments stated that only cattle prices have changed, not the real amounts of payments.

Table 17.1: Year of Household Involvement in Bohali Payments

Number of households reporting (n = 536)

Year	1st Bohali payment	2nd Bohali payment	3rd Bohali payment	4th Bohali payment
Prior to 1940	1	-	-	-
1940-1950	10	2	-	-
1951-1960	16	2	1	-
1961-1970	54	2	1	-
1971-1975	49	7	1	1
1976-1980	55	16	5	-
1981	12	6	-	2
1982	13	4	2	-
1983	21	4	1	-
1984	38	5	3	1
1985	15	3	2	2
Total bohali payments	284	51	16	6

Table 17.2: Relationship of Household Head to the Bride or Groom in past Bohali Payments (n = 536)

Number of households reporting

Relationship	1st Bohali payment	2nd Bohali payment	3rd Bohali payment	4th Bohali payment	All payments
Bride	40	8	3	-	51
Groom	113	12	4	4	133
Father - bride	110	35	15	6	166
Father - groom	101	33	12	6	152
Brother - bride	12	4	1	-	17
Brother - groom	6	-	-	1	7
Uncle - bride	3	-	-	-	3
Uncle - groom	1	-	-	-	1
Other relatives	3	1	-	-	4
Mother - bride	3	-	-	-	3
Total	392	93	35	17	537

Table 17.3: Number of Cattle Involved in All Bohali Payments the Household was involved in (n = 536)

Number of cattle	Number of households reporting: First payment	Second payment	HH Share of total payment
1	23	4	14
2	21	11	9
3	14	9	14
4	27	16	14
5	22	23	13
6	26	17	9
7	26	12	22
8	42	23	33
9	24	19	8
10	69	55	42
11	20	25	16
12	38	48	26
13	16	27	13
14	18	20	16
15	14	14	13
16	18	18	15
17	4	11	5
18	13	11	9
19	3	8	4
20	8	2	4
21	-	3	-
22	2	4	4
23	3	-	2
24	-	1	1
25	-	-	-
26-30	-	-	-
31-40	-	-	-
Total payments with cattle	451	381	306
Mean payment with cattle	8.9	10.6	9.9

Table 17.4: Number of Sheep Involved in All Bohali Payments the Household was involved in (n = 536)

Number of Sheep	Number of households reporting: First Payment	Second Payment	HH Share of Total Payment
1-5	8	-	3
6-10	5	8	3
11-15	5	-	1
16-20	5	2	3
21-25	1	-	1
26-30	3	-	4
31-35	-	-	-
36-40	-	-	-
41-50	-	-	-
51-60	-	-	-
61-70	1	-	-
Don't know	1	-	-
Total payments with sheep	18	10	6
Mean payment with sheep	22.6	11.7	15.6

Table 17.5: Number of Goats Involved in All Bohali Payments the Household was involved in (n = 536)

Number of Goats	Number of households reporting: First Payment	Second Payment	HH Share of Total Payment
1-5	3	-	5
6-10	3	16	10
11-15	1	-	1
21-25	-	-	-
>25	-	-	-
Total payments involving goats	7	16	17
Mean payment involving goats	11.6	9.9	9.9

Table 17.6: Number of Horses Involved in All Bohali Payments the Household was involved in (n = 536)

Number of Horses	Number of households reporting: First payment	Second payment	HH Share of Total payemnt
1	24	25	13
2	4	-	-
3	4	-	2
4	-	-	-
5	-	-	-
6-10	-	1	-
Don't know	-	-	6
Total payments involving horses	32	26	21
Mean payment involving horses	1.4	1.3	1.1

Table 17.7: Number of Donkeys Involved in All Bohali Payments the Household was involved in (n = 536)

Number of Donkeys	Number of households reporting: First payment	Second payment	HH Share of Total payment
1	10	-	3
2	3	-	3
3	3	1	3
4	-	1	-
5	-	-	-
6-10	-	1	-
Total payments involving donkeys	16	3	9
Mean payment involving donkeys	1.6	4.3	2.0

Table 17.8: Amount of Cash Involved in First Bohali Payment the Household was Involved in (n = 536)

Amount of Cash	Number of households reporting		
	First payment	Second payment	HH Share of Total payment
1-100	22	5	15
101-200	17	3	10
201-300	18	1	9
301-400	13	-	5
401-500	4	-	1
501-600	4	2	2
601-700	8	1	5
701-800	9	-	8
801-900	3	-	-
901-1000	8	2	6
1001-1200	3	-	2
1201-1500	1	-	-
1501-2000	2	-	-
2001-3000	1	-	1
3001-4000	-	-	-
> 4000	-	1	-
Don't know	3	-	-
Total payments involving cash	113	15	64
Mean payment involving cash	446.95	330.47	455.88

Table 17.9: Ranking of Preference for Forms of Bridewealth Giving (n = 536)

Form	Number of households reporting			
	First preference	Second preference	Third preference	All responses
Cattle	256	121	21	398
Bulls	25	16	13	54
Sheep	30	107	122	259
Goats	12	40	56	108
Horses	8	18	40	66
Donkeys	4	6	27	37
Cash	149	109	55	313
Other	-	1	-	1
Total	484	418	334	1286

Table 17.10: Ranking of Preference for Forms of Bridewealth Receiving (n = 536)

Form	Number of households reporting			
	First preference	Second preference	Third preference	All responses
Cattle	291	91	34	416
Bulls	17	19	7	43
Sheep	26	147	103	276
Goats	10	38	62	110
Horses	6	23	30	59
Donkeys	2	9	21	32
Cash	120	114	80	314
Total	472	441	337	1250

Table 17.11: Preference of Forms of Bohali Payments, Number of Animals Prefered to One Cow (n = 536)

	Number of households reporting					
Number of head	Sheep	Goats	Oxen	Bulls	Horses	Donkeys
1	-	-	443	486	447	442
2	2	2	19	6	18	8
3	4	4	-	-	-	-
4	61	63	-	-	-	2
5	192	187	-	-	-	-
6	144	140	-	-	-	-
7	17	20	-	-	-	-
8	39	42	-	-	-	-
9	6	6	-	-	-	-
10	42	43	-	-	-	-
11-15	12	12	-	-	-	-
16-20	1	1	-	-	-	-
1 prefered to 2 cows	-	-	56	23	52	14
2 prefered to 3 cows	-	-	-	-	-	1
Total responses	520	520	518	515	517	467
Mean per HH	6.1	6.1	0.98	0.99	0.98	1.01

Table 17.12: Preference of Forms of Bohali Payments, Amount of Cash Prefered to One Cow (n = 536)

Amount of Cash	Number of households reporting
0-50	16
51-100	122
101-150	48
151-200	210
201-250	10
251-300	65
301-350	6
351-400	28
401-450	1
451-500	7
Total responses	513
Mean amount of cash	190.3

Table 17.13: Is the Form of Bohali Payments Changing Over Time?

(n = 536)

Response	Number of households	% of households
Yes	396	76.3
No	123	23.7

Table 17.14: Forms of Bohali Payment which are becoming less important over time (n = 536)

Form	Number of households
Livestock	84

Table 17.15: Reasons why livestock is becoming less important in bohali payments (n = 536)

Reasons	Number of households
Lack of animals	59
Lack of rangeland	4
Payment with livestock is expensive	3
Total	66

Table 17.16: Are the Amounts of Bohali Payments Changing Over Time? (n = 536)

Response	Number of households
Increasing	238
Decreasing	57
About the same	211
Total	506

Table 17.17: Reasons Why Bohali Payments are Decreasing

(n = 536)

Reason	Number of households
Lack of livestock	7
Marriage has lost meaning	7
Happily married is more important	6
Younger married couples	1
Money is liquid whilst livestock last	2
Unemployment	1
Cash rate is lower than livestock	7
Number of livestock for bohali has decreased	2
No more full payment	15
Partners unreliable	1
People just live together	1
Total	50

Table 17.18: Reasons Why Bohali Payments are Increasing

(n = 536)

Reason	Number of households
Increased cost of living	22
Increased wages	13
Cows die - money keeps	5
General inflation	36
Higher bohali demand	8
Cattle price is increasing	59
Sheep/cow/horse exchange increasing	11
Donkey price increasing	8
Educated brides	8
Inflation & educated brides	8
Bohali has become business	7
Cash payment is higher than livestock	9
Problems getting livestock	1
Bohali has lost meaning	1
Now 25 versus 20 cattle	2
If parents are against marriage	1
Total	199

Table 17.19: Reasons Why Bohali Payments are Unchanged (n = 536)

Reason	Number of households
Only cattle price has changed	175
Bohali is flexible	2
Marriages don't last	1
Total	178

18. MAFISA

Mafisa is an expanded form of borrowing and lending of livestock which has been in existance in Lesotho at least since the middle of the 19th century. Kimble (1979) documents how Moshoeshoe I used mafisa and other bohlanka relationships to bind the Basotho people together both socially and economically. During the reign of Moshoeshoe I most cattle involved in mafisa arrangements were owned by chiefs and were lent out to commoners. In exchange for the use of the cattle, the commoners were bound to respect the authority of the local chiefs and the ultimate authority of the Paramount Chief Moshoeshoe I.

As the economic, social, and political climate in Lesotho has evolved over the last 150 years, so has mafisa. While some politicians and chiefs undoubtedly own large numbers of livestock which are managed by others through different forms of mafisa relationships, the primary justification is more often economic than political. Social factors continue to play an important roles, but economic factors now appear to be the primary motives behind most mafisa arrangements. In fact, borrowing and lending of animals through mafisa now appears to be one of the important management techniques available to Basotho. Households which lack access to key financial, labour, management or range resources enter into mafisa relationships with other households with complementary resource bases so as to maximize their joint returns from the livestock enterprises.

Information on tables 18.1 and 18.2 indicate that rights to the flow products produced by livestock involved in mafisa relationships vary significantly between households, suggesting that the institution allows the transactions to vary depending upon the specific circumstances. Of 107 households which reported having sheep borrowed on mafisa, 43 clipped the sheep and sold the wool. Proceeds from the wool sales were most often kept by the keeper of the sheep, but in three cases the proceeds went to the owner, and in three other cases the proceeds were shared between the owner and the keeper. Lambs born to mafisa'd in sheep went to owners in 27 of 34 reported cases, in six cases the lambs went to the keeper, and in one case the lambs were shared. Goats mafisa'd in were clipped by the keeper in 47 of 73 cases with the proceeds of the mohair sales kept by the keeper in 45 of 49 reported instances. Kids born to mafisa'd in goats went to the owner in 29 of 38 cases, to the keeper in 8 cases, and were shared in one case. Oxen borrowed under mafisa were often used by the keeper (55 of 84 instances), but were also used by the owner in a significant number of cases (25 of 84). Of 45 cases when calves were born to cattle mafisa'd in, the calves went to the owner in 38 cases, to the keeper in 7 cases, and were shared in one case.

Reasons stated for lending and borrowing animals on mafisa were a mix of economic, social and cultural factors. Of 393 responses to the question, what is the most important reason for lending cattle to others under mafisa arrangements, 61.2 percent cited gaining access to resources-- herding labour (45.5 percent), better management (10.2 percent), grazing land (3.3 percent), and cattle posts (2.5 percent) -- while 34.1 percent stated the social reason of helping others, and 2.5 percent cited the belief that cattle on mafisa loan will multiply faster than cattle kept in the herd -- an economic / social / cultural motivation. Responses to the

question, what is the most important reason for borrowing cattle from others under mafisa arrangements indicated a similar mix of economic, social and cultural motivations. Of the 70.9 percent of the reasons which would be classified as economic, access to draught power (47.9 percent) was most important, followed by income from products (8.7 percent), reduction of per animal herding costs by expanding the total herd (6.7 percent), milk from cows (6.4 percent), and gain progeny (1.1 percent). Help others, a social motivation, was cited by 25.2 percent of the households, and the belief that cattle on mafisa was multiply faster was ctied by 2.2 percent.

Reasons given for borrowing and lending sheep and goats under mafisa arrangements were similarly divided between economic and social. Economic factors accounted for 67.5 percent of all reasons for lending sheep and goats. In order of their importance these factors were: gain access to herding labour; gain access to better management; gain access to grazing land; gain access to cattle posts; too few animals to herd; and too many animals to herd. The social factor, help others, accounted for 28.3 percent of reasons, and 3.1 percent of the reasons were related to the belief that sheep on mafisa loan multiply faster. Access to the income from sale of products was the dominant reason cited by respondants for borrowing sheep and goats from others under mafisa arrangements (69.2 percent). Other economic reasons included: reduce herding costs; increase herd size; and gain progeny. Help others was cited by 20.1 percent of the respondants.

Table 18.1: Utilisation of the Products of Animals Borrowed on Mafisa Arrangements (n = 536)

	Number of households		
	Yes	No	Total Responses
Were borrowed sheep clipped?	43	64	107
Were borrowed goats clipped?	47	26	73
Were borrowed oxen used for draft by the owner?	25	56	81
Were borrowed oxen used for draft by the keeper?	55	29	84

Table 18.2: Recipient of Gains of Products from Animals Borrowed on Mafisa Arrangements (n = 536)

	Number of households reporting			
	Proceeds to Owner	Proceeds to Keeper	Proceeds Shared	Total Responses
Wool Sales	3	37	3	43
Mohair Sales	3	45	1	49
Calves	38	7	-	45
Lambs	27	6	1	34
Kids	29	8	1	38

Table 18.3: Most important reason for lending cattle to others under mafisa arrangements (n = 536)

Reason	Number of households
Help others	134
Gain access to grazing land	13
Gain access to better management	40
Access to herding labour	179
Access to cattle post	10
Too few animals to herd	5
Too many animals to herd	2
Loaned cattle multiply fast	10
Total	393

Table 18.4: Most important reason for borrowing cattle from others under mafisa arrangements (n = 536)

Reason	Number of households
Helping others	90
Gain progeny	4
Gain draft power	171
Gain milking	23
Reduce herding costs	24
Gain access to herding labour	6
Income from products	31
Believed that mafisad out will multiply	8
Total	357

Table 18.5: Most Important Reason for lending sheep to others under mafisa arrangements (n = 536)

Reason	Number of households
Help others	98
Gain access to grazing land	12
Gain access to better management	47
Gain access to herding labour	155
Gain access to cattle post	9
Too few animals to herd	5
Too many animals to herd	2
Woolsale proceeds	5
Loaned sheep multiply fast	11
Total	344

Table 18.6: Most important reason for borrowing sheep from others under mafisa arrangements (n = 536)

Reason	Number of households
Help others	69
Gain progany	3
Reduce herding costs	19
Gain access to herding labour	4
Income from products	235
Increase herd size	7
Total	337

Table 18.7: Most Important Reason for lending goats to others under mafisa arrangements (n = 536)

Reason	Number of households
Help others	96
Access to grazing land	12
Gain access to better management	49
Gain access to herding labour	154
Gain access to cattle post	11
Too few animals to herd	4
Too many animals to herd	3
Mohair proceeds	3
If managed elsewhere will multiply	10
Total	342

Table 18.8: Most important reason for borrowing goats from others under mafisa arrangements (n = 536)

Reason	Number of households
Help others	65
Gain progany	4
Gain draft power	2
Reduce herding costs	22
Gain access to herding labour	5
Income from animal products	226
Borrowed goats multiply fast	7
Total	329

19. HOUSEHOLD FINANCES

'Store of wealth', 'savings account', 'only sold to meet emergency cash needs' are a few of the terms commonly used by analysts when describing livestock in African livestock systems. Although the actual meaning implied by these terms is often difficult to discern, all suggest that livestock are treated by their owners as investments. If they are frequently used as a medium of exchange for other goods and services, then they are relatively liquid investments. If they are only sold to pressing financial committments (emergency cash needs), then they are relatively illiquid investments.

In an attempt to discern the relative importance and liquidity of livestock relative to other investments, a series of questions were asked about household finances. Tables 19.1 to 19.5 report information gathered about bank accounts held by the households. 36.1 percent of the households indicated having a bank account, 74.9 percent of which were savings accounts, and 19.1 percent of which were current accounts. Of a total of 233 bank accounts, 191 were located in banks in Lesotho and 42 were located in banks in South Africa. The most important reasons for keeping bank accounts in South Africa were the highest interest paid and the closeness to work. Very few of the respondants appeared to be familiar with the payment of interest on their bank accounts. Table 19.5 indicates that the most common response to 'what is the per annum rate of interest on paid on your bank account' was 'don't know'.

The hypothesis that Basotho livestock owners prefer livestock as a method of saving funds would have to be rejected on the basis of the data contained in table 19.7. When asked the question: if the household has surplus funds available, how best can these be saved? 68.3 percent of the respondants suggested some financial institution, while only 6.9 percent suggested livestock. Other responses were build a house (6.2 percent), build a shop (5.0 percent), keep cash at home (3.9 percent), pay bohali (2.5 percent), buy a tractor (2.1 percent), and educate children (1.9 percent). Not the preferred way of saving funds, livestock were also not a common method for conducting transactions, indicating that they are not highly liquid. Only 15 households indicated bartering livestock for any other goods during the year.

The hypothesis that livestock are only sold to meet emergency cash needs can be neither accepted nor rejected on the basis of table 19.10, but the data do indicate that the sale of livestock and livestock products often allow households to meet emergency cash needs. These cash needs--examples here are hospital expenses, funeral expenses, school fees and livestock expenses -- were most often met with current income, savings, loans, or the proceeds of sale of livestock or livestock products. Other goods and grain were also sold, but less often than livestock or livestock products.

Table 19.1: Does any member of the HH have a bank account (n = 536)

Response	Number of households	% of households
Yes	189	36.1
No	334	63.9
Total	523	100.0

Table 19.2: Type of bank account(s) which the HH has (n = 536)

Type of account	Number of households	% of households
Current account	38	19.1
Savings account	149	74.9
Time deposit	7	3.5
Other	1	.5
Current & savings	1	.5
Savings & time deposit	2	1.0
Current & time deposit	1	.5
Total	199	100.0

Table 19.3: Locations of bank accounts (n = 536)

Type of account	Number of households reporting Lesotho	South Africa
Current account	38	21
Savings account	119	13
Term deposit	34	8
Total	191	42

Table 19.4: If the HH has an account(s) in South Africa - why? (n = 536)

Reason	Number of households
Higher interest	9
Closer to work	9
More trustworthy	1
Other reason	9
Total	28

Table 19.5: Interest rates paid on bank accounts (% per annum) (n = 536)

Interest Rate (%)	Number of households reporting: Current Account	Savings Account	Term Deposit	Credit Union Loan
1	-	-	-	-
2	18	-	-	-
3	-	-	-	-
4	-	-	-	-
5	1	3	-	-
6	-	1	-	-
7	-	-	-	-
8	-	1	1	-
9	-	1	1	-
10	-	1	1	-
11	-	-	-	-
12	-	-	-	-
13	1	-	-	-
Unknown	42	128	14	-
Total	62	135	17	-

Table 19.6: HH dealings with credit unions (n = 536)

Type of Dealings	Number of households
Does the HH have savings with a credit union?	17
Does the HH have a loan with a credit union?	16

Table 19.7: Attitudes towards savings - If the household has surplus funds available, how best can these be saved? (n = 536)

Response	Number of households
Commercial bank	237
Credit Union	12
Other financial institution	105
Build a house	32
Build a shop	26
Buy furniture	6
Buy another non-farm asset	4
Buy a tractor	11
Pay bohali	13
Buy sheep or goats	10
Buy cattle	14
Buy dairy cows	9
Buy any livestock	3
Buy hammermill	6
Keep cash at home	20
Educate children	10
Total	518

Table 19.8: Use of Livestock for barter in transactions - Did the households trade livestock for another good, or receive livestock in return for another good during the year? (n = 536)

Response	Number of households
Yes	15
No	517
Total	532

Table 19.9: HH incurrence of basic and emergency cash needs (n = 536)

Expenses incurred by HH during the preceeding year	Number of households
Hospital expenses	402
Funeral expenses	145
School fees	341
Livestock expenses	86

Table 19.10: Alternative means of meeting basic and emergency needs (n = 536)

Cash need	Number of households reporting: Hospital Expenses	Funeral Expenses	School Fees	Livestock Expenses
Current income	301	105	260	72
Savings	34	32	32	19
Borrow	30	16	12	-
Sale of livestock	40	21	35	6
Sale of grain	11	6	17	7
Sale of other goods	6	3	6	1
Total	422	183	362	105

20. ATTITUDES TOWARD LIVESTOCK PRODUCTION AND SALE

In the final section of this tabulation of survey results, the focus is shifted from physical and financial aspects of the livestock enterprises to the attitudes of the stockowners to those enterprises. Respondants were asked a series of questions to determine their attitudes toward livestock production, ownership and sale.

FACTORS LIMITING LIVESTOCK PRODUCTION

Livestock owners were asked: 'What are the most important factors limiting livestock production?'. Of all responses, the most frequently mentioned was 'no money to buy animals' (33.4 percent of all responses), followed by lack of herding labour (12.3 percent), drought (9.8 percent), disease and management (9.0 percent), overstocking (8.4 percent), no money to buy other inputs (4.6 percent), lack of family labour (3.7 percent), lack of winter fodder (3.6 percent), village grazing area during summer (2.6 percent), village grazing area during winter (2.5 percent), summer cattlepost grazing (1.6 percent). Summarized by type of reason, these data indicate that financial constraints were considered to be most important (38.0 percent), grazing constraints second most important (24.9 percent), labour constraints third most important (16.0 percent), disease and management fourth most important (9.0 percent), and lack of winter fodder fifth most important (3.6 percent). Less than one percent mentioned erosion as a constraint to their production.

HYPOTHETICAL CATTLE SALE

Attitudes toward the sale of livestock were obtained by asking the respondants to think of a hypothetical situation in which, for any one of a number of possible reasons, they were to sell one of their cattle today. The following questions were asked about that hypothetical sale: What type of animal would it be? What age would it be? What weight would it be? What price would be expected? Why would they expect that price? Who would be the expected buyer? Answers to the questions are summarized in tables 20.2 to 20.7.

Table 20.2 indicates that there is a marked preference for selling male animals. 71.1 percent of the respondants indicated they would sell an ox, 5.0 percent indicated they would sell a bull, 1.9 percent indicated they would sell either an ox or a bull, while 21.2 percent indicated they would sell a cow. Only one household thought they would sell a calf.
The most frequently mentioned ages of the animals involved in the hypothetical sales were five years, four years, nine years, eight years and six years. Very few of the households could suggest what weight the animal would be. Of 22 households that did mention a weight, the average was 270.9 kilograms. Price expectations ranged from M20 to M1100, with the average being M382.72. The similarity between this average price expectation and the average price paid for cattle at LPMS auction sales held during 1985 (M340 see Swallow, Mokitimi and Brokken 1986) indicates that a fair degree of market knowledge is held by the cattle owners surveyed. This is supported by data on table 20.6. Asked how they formed their price expectations, 55.4 percent of respondants gave reasons related to the condition of the animal, 21.2 percent cited direct knowledge of

market prices, 10.5 percent indicated that they needed that price to cover production costs, and 10.2 percent based their expected price on their household cash needs. Only one household suggested that they had no basis for the price expectation.

Of the 385 households which responded to the question, who would be the expected buyer of an animal sold today, the majority (75.3 percent) indicated no preference and responded 'anybody'. Of those households which did specify a buyer, the most common responses were auction, butchery, farmer in same village, Ministry of Agriculture, traders, and LPMS (indicating some ignorance about the auction sales facilitated by the LPMS).

REASONS FOR OWNING LIVESTOCK

Tables 20.8 to 20.13 report information given by the households regarding the most important reasons for owning cattle, sheep, goats, horses and donkeys. For all animals a variety of factors were cited, some of which were economic, social or cultural. The vast majority, however, were economic.

In light of the fact that all livestock in Lesotho are multi-purpose animals, households were allowed to supply up to four reasons for owning each species of animals, but were asked to rank those reasons as most important, second most important, third most important and fourth most important. For each factor frequencies are given for each ranking, and are summed for all responses.

Increase herd size through the production of calves, and milk production appear to be equally the most important reasons for owning cows. Other important reasons, in order of their frequency for all responses are: draught, sale, beef, dung, bohali, and traditional practices. The most important reason for owning oxen is definately for the production of draught power. Following draught power are: sale, beef, traditional practices, transport, bohali, dung, funerals, balimo and hides. Breeding is clearly the most important reason for owning bulls. Other reasons include draught power, beef, sale, bohali, and dung.

The justifications given for owning sheep are very similar to those given for owning goats. For sheep the most important reason was wool production, for goats the most important was mohair production. For both sheep and goats hair production was followed closely by meat production, sale, traditional rites, increase herd size through progeny, and bohali.

For horses and donkeys the two most important reasons for ownership were haulage of goods and haulage of people. Following these were draught power, sale, meat and bohali.

Table 20.1: Most Important Factors Limiting Livestock Production (n = 536)

	Number of households reporting			
	Most Important Factor	Second Most Important Factor	Third Most Important Factor	All Responses
No money to buy animals	195	14	6	215
No money to buy other inputs	5	19	6	30
Family labour	7	12	5	24
Herding labour	24	41	14	79
Disease/management	21	25	12	58
Lack of winter fodder	5	8	10	23
Winter grazing around village	6	5	5	16
Winter cattlepost grazing	1	2	-	3
Summer grazing around village	2	8	7	17
Summer cattlepost grazing	5	3	2	10
Overstocking	34	13	7	54
Drought	19	27	17	63
Erosion/donga	1	-	3	4
Other	33	7	8	48
Total	358	184	102	644

Table 20.2: If the Households were to sell an Animal today, what type would they be? (n = 536)

	Ox	Bull	Cow	Calf	Ox or Bull	None	Total
No. of HH	298	21	89	1	8	2	419
% of HH	71.1	5.0	21.2	.2	1.9	0.5	99.9

Table 20.3: If the Household were to sell an animal today, what age would it be? (n = 536)

Years of Age	Number of households	% of households
1	7	2.0
2	15	4.3
3	22	6.3
4	46	13.1
5	57	16.2
6	30	8.5
7	23	6.5
8	30	8.5
9	36	10.2
10	13	3.7
12	10	2.8
13	1	0.3
> 13	16	4.7
Calf	5	1.4
Aged	29	8.2
> 5 years	6	1.7
Average	1	0.3
Any age	4	1.1
Total	351	99.8

Table 20.4: If the Household were to sell an animal today, what weight would it be? (n = 536)

Number of kilograms	Number of households	% of households
30	1	4.5
100	4	18.2
130	1	4.5
200	7	31.8
250	1	4.5
300	1	4.5
400	3	13.6
500	2	9.1
550	1	4.5
700	1	4.5
Total	22	99.7

Mean weight = 270.9

Table 20.5: If the Household were to sell an animal today, what price would be expected? (n = 536)

Price Range (maloti)	Number of households	% of households
20-50	3	0.6
51-150	18	4.3
151-250	73	17.4
251-350	93	22.3
351-450	116	27.9
451-550	47	11.0
551-650	41	9.8
651-750	7	1.6
751-850	15	3.6
851-1100	3	0.7
Total	416	99.2

Average price expectation = M382.72

Table 20.6: If the Household were to sell an animal, what reasons for price expectation (n = 536)

Reasons	Number of households	% of households
Condition	149	36.4
Mixed breed	5	1.2
Old	9	2.2
Young and well fed	11	2.7
Usual price	23	5.6
Sick	3	0.7
Well fed	19	4.6
Cover my expenses	41	10.0
Market price	54	13.2
Prices have gone up	1	0.2
To buy furniture	1	0.2
Age and use to buyer	3	0.7
To buy a cow	2	0.5
Is important thing	2	0.5
Animals are expensive	8	2.0
Calf will make buyer	4	1.0
Age and size	26	6.3
Cost of living is high	6	1.5
My needs	27	6.6
Ox = 2 cows	1	0.2
MOA price	1	0.2
Make profit and maintain another	2	0.4
To buy sheep	2	0.4
Family benefits	1	0.2
It's a dairy cow	1	0.2
Pregnant	1	0.2
Desperate for money	4	1.0
No basis	1	0.2
Don't want to charge high price	2	0.4
Total	410	99.5

Table 20.7: If the Household were to sell an animal who would be the expected buyer? (n = 536)

Expected buyer	Number of households	% of households
Auction	29	7.5
Farmer in same village	15	3.9
Anybody	290	75.3
Butchery	26	6.8
Farmer from RSA	1	0.3
Chief Masupha Seeiso	1	0.3
National Feedlot	1	0.3
Ministry of Agriculture	6	1.6
High schools	1	0.3
Sibling	1	0.3
PMU	2	0.5
Traders	6	1.6
LPMS	4	1.0
LEMA	1	0.3
Anybody/Butchery	1	0.3
Total	385	100.3

Table 20.8: Reasons Stated for owning cows (n = 536)

Number of Households Reporting

Reason	Most important reason	2nd Most important reason	3rd Most important reason	4th Most important reason	All Responses
Increased herd size	267	142	22	6	437
Milk	228	221	21	4	474
Draught	9	62	112	29	212
Sale	1	26	45	31	103
Beef	2	12	39	31	84
Traditional practices	-	1	4	5	10
Payment of shepherds	-	-	-	1	1
Funerals	-	1	2	-	3
Transport	-	-	1	-	1
Bohali	-	3	20	7	30
Because I have them	1	-	-	-	1
Hides	-	-	1	2	3
Easy to feed	-	1	-	-	1
No need for shepherds	-	-	1	-	1
No interference with kids education	-	-	-	1	1
Making butter	-	1	-	-	1
Dung	-	-	15	25	40
Total	508	470	283	142	1403

Table 20.9: Reasons Stated for owning oxen (n = 536)

Number of Households Reporting

Reason	Most important reason	2nd Most important reason	3rd Most important reason	4th Most important reason	All responses
Draught	439	25	7	1	472
Sale	26	199	33	10	268
Beef	4	33	46	10	93
Transport	3	29	8	3	43
Hides	1	1	2	4	8
Traditional practices	-	12	35	8	55
Dung/manure	-	16	11	6	33
Bohali	-	13	18	9	40
Funerals	-	8	4	1	13
Balimo	-	4	2	2	8
Bohali & funerals	-	-	-	-	-
Rentals	-	1	-	-	1
Total	473	341	166	54	1034

Table 20.10: Reasons Stated for owning bulls (n = 536)

Reason	Number of Households Reporting: Most important reason	2nd Most important reason	3rd Most important reason	4th Most important reason	All responses
Breeding	358	21	4	-	383
Traditional/ceremonies	2	2	3	-	7
Draught	50	59	11	-	120
Sale	7	43	-	1	51
Beef	3	31	24	6	64
Rental for breeding	3	4	-	-	7
Transport	1	-	-	-	1
Hides	-	-	1	4	5
Dung/fuel/manure	1	10	3	2	16
Bohali	7	3	29	5	44
Initiation	2	5	1	-	8
Funerals	1	4	-	-	5
Bohali/hides/situation	-	-	1	-	1
Payment of traditional healers	-	-	1	-	1
Total	435	182	78	18	713

Table 20.11: Reasons Stated for owning sheep (n = 536)

Reason	Number of Households Reporting: Most important reason	2nd Most important reason	3rd Most important reason	4th Most important reason	All responses
Increase herd size	21	9	5	-	35
Wool	291	77	28	5	401
Mutton	83	206	73	9	371
Traditional rites	20	16	12	7	55
Sale	25	86	97	14	222
Bohali	-	1	8	13	22
Milk	-	3	1	1	5
Balimo	1	2	2	-	5
Dung/manure	-	1	2	-	3
Skins	1	2	2	2	7
Initiation	-	1	1	2	4
Traditional healing	3	1	3	-	7
Payment of shepherds	-	-	1	-	1
Total	445	405	235	53	1138

Table 20.12: Reasons Stated for owning goats (n = 536)

Number of Households Reporting

Reason	Most important reason	2nd Most important reason	3rd Most important reason	4th Most important reason	All responses
Increase herd size	16	10	2	2	30
Mohair	294	74	22	2	392
Mutton	78	186	68	4	336
Traditional rites	13	11	11	5	40
Sale	16	90	87	10	203
Bohali	-	1	10	10	21
Milk	1	5	1	1	8
Balimo	-	-	2	-	2
Dung/manure	1	1	2	1	5
Skins	1	2	5	-	8
Initiation	-	-	1	-	1
Traditional healing	1	-	1	1	3
Total	421	380	212	36	1049

Table 20.13: Reasons Stated for owning equines (n = 536)

Number of Households Reporting

Reason	Most important reason	2nd Most important reason	3rd Most important reason	4th Most important reason	All responses
Haulage	211	161	11	3	386
Transport - people	197	133	13	3	346
Draft	24	21	12	2	59
Sale	6	30	12	2	50
Increase herd	4	1	1	-	6
Dung	2	1	1	1	5
Bohali	-	3	7	-	10
Meat	-	10	8	-	18
Horse racing	-	-	1	-	1
Total	444	360	66	11	881

PART C

LIVESTOCK PRODUCTION, MARKETING
AND SLAUGHTER SURVEY

1. Introductory Statement

2. Interviewer's name _____

3. Cluster area _____

4. Name of village _____

5. Name of household head _____

Do the household own or manage any livestock, including cattle, sheep, goats, horses or donkeys? Include mafisa animals who own that are being cared for by someone else and mafisa animals you are using which are owned by someone else.

_____ yes

_____ no

If yes, continue with questionnaire.

If no, make parting comments and depart.

SURVEY PART I HOUSEHOLD DEMOGRAPHY, INCOME AND ASSETS

[1] HOUSEHOLD COMPOSITION AND EMPLOYMENT

Name	[1] Relation	[2] Marital Status	[3] Residential Status	Highest Education	[4] Occupation or employment	Now in school	[5] Location of employment	Wages per month

Codes: Household Composition and Employment

[1] Relationship to Household Head

1 Household Head
2 Spouse of Head
3 Child of head/spouse
4 Parent of head/spouse
5 Sibling of head/spouse
6 Spouse of child of head/spouse
7 Grandchild of head/spouse
8 Other relative to head/spouse
9 Full-time hired worker
10 Other person not related to head/spouse

[2] Marital Status

1 Single
2 Married
3 Widowed
4 Separated/divorced

[3] Residential Status

1 Resident
2 Absent, outside Lesotho - work
3 Absent, outside Lesotho - other reasons
4 Absent, in Lesotho - work
5 Absent, in Lesotho - school
6 Absent, in Lesotho - other reasons

[4] Occupation - Employment

1. Farmer
2. Housewife
3. Student
4. Domestic Worker - Include housekeeping and gardening
5. Local shop or business owner
6. Shop or business employee
7. Migrant worker - mines
8. Migrant worker - farms
9. Migrant worker - other
   Specify ----------
10. Government Employee
11. Herdboy/shepherd
12. Other, Specify ----------
13. Unemployed
14. Unemployed, looking for work in Lesotho
15. Unemployed, looking for work in South Africa
16. Child

[5] Location of Employment

1. Lesotho : Maseru
2. Lesotho : District area
3. Lesotho : Local area
4. Lesotho: Other
5. South Africa
6. Other, Specify ----------

2] HOUSEHOLD CASH INCOME (except cattle, sheep, goats, horse and donkeys and their products)

Type of Work/Income Source	Average Monthly Cash Income Received in Last Year (Maloti)
Work of men - in R.S.A.	----------
Work of women - in R.S.A.	----------
Work of men - within Lesotho	----------
Work of women - within Lesotho	----------
Sale of chickens, eggs, pigs or pork	----------
Sale of joala or beer	----------
Sale of produce from fields	----------
Sale of vegetables	----------
Rental of house or room	----------
Rental of farm equipment	----------
Profit from shop/case/taxi	----------
Sales of HH produced handicrafts	----------
Sale of other things Specify ----------	----------
Gifts or help from relatives	----------
Payment of building, thatching, etc.	----------
Other cash sources Specify ----------	----------

[3] Please tell us your household's main sources of income, in order of importance

1 ----------
2 ----------
3 ----------
4 ----------

[4] Please tell us the five previous occupations/employments that the household head has held prior to the present situation. (List most recent first).

	Occupation (previous code)	Year Started	Year Ended
1	----------	----------	----------
2	----------	----------	----------
3	----------	----------	----------
4	----------	----------	----------
5	----------	----------	----------

[5] HOUSEHOLD BUILDINGS

	Number	Roof		Walls			Floor	
		Metal	Thatch	Stone	Sticks/ Earth/ Stones	Bricks	Concrete	Tiles/ Carpet	Mud/ Dung
Rondavel	_____	_____	_____	_____	_____	_____	_____	_____	_____
Square/ Rectangular	_____	_____	_____	_____	_____	_____	_____	_____	_____
Stantaka/ Optaka	_____	_____	_____	_____	_____	_____	_____	_____	_____

[6] AGRICULTURAL ASSETS

	Animal Drawn		Tractor Drawn	
	Number	Shared Ownership (Define form)	Number	Shared Ownership (Define form)
Plough	_____	_____	_____	_____
Cultivator	_____	_____	_____	_____
Planter	_____	_____	_____	_____
Cart	_____	_____	_____	_____
Tractor	_____	_____	_____	_____
Harrow	_____	_____	_____	_____
Baler	_____	_____	_____	_____
Harvester	_____	_____	_____	_____
Other	_____	_____	_____	_____
Specify	_____	_____	_____	_____

Suvey Part II: Livestock Ownership and Transactions

[1] Of animals that you own or manage, please provide the following information about each species

	Cattle	Sheep	Goats	Horses	Donkeys
Number managed	_____	_____	_____	_____	_____
Number owned	_____	_____	_____	_____	_____
Number mafisad in	_____	_____	_____	_____	_____
Number mafisad out	_____	_____	_____	_____	_____

[2] If animals are mafisad in or out, describe the relationship of the giver/receiver to the household head

	Mafisad in	Mafisad out
Cattle	_____	_____
Sheep	_____	_____
Goats	_____	_____
Horses	_____	_____
Donkeys	_____	_____

[3] Do you own male cattle (including any mafisad out)? Yes--- No----
If yes, please provide the following information.

	Age				
	June 1985				June 1984
	1-4	5-9	9+	Total	Total
Current Inventory June 1,1985 of each age					
- Bulls	____	____	____	____	____
- Oxen	____	____	____	____	____
Animals Acquired (June 1/84--May 31/85)					
- Purchased or traded	____	____	____	____	____
- From whom purchased	____	____	____	____	____
- Where purchased	____	____	____	____	____
- Purchase price	____	____	____	____	____
- Gift received or bohali	____	____	____	____	____
Animal Leaving (June 1/84--May 31/85)					
- Died	____	____	____	____	____
- Gift or bohali	____	____	____	____	____
- Traded or sold	____	____	____	____	____
- To whom sold	____	____	____	____	____
- Where sold	____	____	____	____	____
- Sales price	____	____	____	____	____
- Butchered	____	____	____	____	____
- Stolen	____	____	____	____	____
Inventory June 1/84	____	____	____	____	____ Total 1983

[4] Do you own female cattle (including any mafisad out) Yes--- No---
If yes, please provide the following information.

	Age				
	June 1985				June 1984
	1-4	5-9	9+	Total	Total
Current Inventory June 1,1985 of each age					
- Total cows	____	____	____	____	____
- Cows that have had calves	____	____	____	____	____
Calves born in past 12 months					
- born dead or died soon	**	**	**	____	____
- born alive	**	**	**	____	____
- died during year	**	**	**	____	____
- males alive now	**	**	**	____	____
- female alive now	**	**	**	____	____
Animals Acquired (June 1/84--May 31/85)					
- Purchased or traded	____	____	____	____	____
- From whom purchased	____	____	____	____	____
- Where purchased	____	____	____	____	____
- Purchase price	____	____	____	____	____
- Gift received or bohali	____	____	____	____	____
Animal Leaving (June 1/84--May 31/85)					
- Died	____	____	____	____	____
- Gift or bohali	____	____	____	____	____
- Traded or sold	____	____	____	____	____
- To whom sold	____	____	____	____	____
- Where sold	____	____	____	____	____
- Sales price	____	____	____	____	____
- Butchered	____	____	____	____	____
- Stolen	____	____	____	____	____
Inventory June 1/84	____	____	____	____	____ Total 1983

[5] Do you own any male sheep (including any mafisad out) Yes--- No---
If yes, please provide the following information.

	Age			
			June 1985	June 1984
	<1 yr	>1 yr	Total	Total
Current Inventory June 1,1985 of each age				
- rams	____	____	____	____
- wethers	____	____	____	____
Animals Acquired (June 1/84--May 31/85)				
- Purchased or traded	____	____	____	____
- From whom purchased	____	____	____	____
- Where purchased	____	____	____	____
- Purchase price	____	____	____	____
- Gift received or bohali	____	____	____	____
Animal Leaving (June 1/84--May 31/85)				
- Died	____	____	____	____
- Gift or bohali	____	____	____	____
- Traded or sold	____	____	____	____
- To whom sold	____	____	____	____
- Where sold	____	____	____	____
- Sales price	____	____	____	____
- Butchered	____	____	____	____
- Stolen	____	____	____	____
Inventory June 1/84	____	____	____	____ Total 1983

[6] Do you own any female sheep (including any mafisad out) Yes--- No---
If yes, please provide the following information.

	Age			
	June 1985			June 1984
	<1 yr	>1 yr	Total	Total
Current Inventory June 1,1985 of each age				
- number of females	____	____	____	____
- ewes that have had lambs	____	____	____	____
Lambs born in last 12 months				
- born dead or died soon	____	____	____	____
- died during year	____	____	____	____
- alive now	____	____	____	____
Animals Acquired (June 1/84--May 31/85)				
- Purchased or traded	____	____	____	____
- From whom purchased	____	____	____	____
- Where purchased	____	____	____	____
- Purchase price	____	____	____	____
- Gift received or bohali	____	____	____	____
Animal Leaving (June 1/84--May 31/85)				
- Died	____	____	____	____
- Gift or bohali	____	____	____	____
- Traded or sold	____	____	____	____
- To whom sold	____	____	____	____
- Where sold	____	____	____	____
- Sales price	____	____	____	____
- Butchered	____	____	____	____
- Stolen	____	____	____	____
Inventory June 1/84	____	____	____	____ Total 1983

[7] Do you own any male goats (including any mafisad out) Yes--- No---
If yes, please provide the following information.

	Age			
	June 1985			June 1984
	<1 yr	>1 yr	Total	Total
Current Inventory June 1,1985 of each age				
- billies	____	____	____	____
- wethers	____	____	____	____
Animals Acquired (June 1/84--May 31/85)				
- Purchased or traded	____	____	____	____
- From whom purchased	____	____	____	____
- Where purchased	____	____	____	____
- Purchase price	____	____	____	____
- Gift received or bohali	____	____	____	____
Animal Leaving (June 1/84--May 31/85)				
- Died	____	____	____	____
- Gift or bohali	____	____	____	____
- Traded or sold	____	____	____	____
- To whom sold	____	____	____	____
- Where sold	____	____	____	____
- Sales price	____	____	____	____
- Butchered	____	____	____	____
- Stolen	____	____	____	____
Inventory June 1/84	____	____	____	____ Total 1983

[8] Do you own any female goats (including any mafisad out) Yes--- No---
If yes, please provide the following information.

	Age			
		June 1985		June 1984
	<1 yr	>1 yr	Total	Total
Current Inventory June 1,1985 of each age				
- number of females	____	____	____	____
- does that have had kids	____	____	____	____
Kids born in last 12 months				
- born dead or died soon	____	____	____	____
- died during year	____	____	____	____
- alive now	____	____	____	____
Animals Acquired (June 1/84--May 31/85)				
- Purchased or traded	____	____	____	____
- From whom purchased	____	____	____	____
- Where purchased	____	____	____	____
- Purchase price	____	____	____	____
- Gift received or bohali	____	____	____	____
Animal Leaving (June 1/84--May 31/85)				
- Died	____	____	____	____
- Gift or bohali	____	____	____	____
- Traded or sold	____	____	____	____
- To whom sold	____	____	____	____
- Where sold	____	____	____	____
- Sales price	____	____	____	____
- Butchered	____	____	____	____
- Stolen	____	____	____	____
Inventory June 1/84	____	____	____	____ Total 1983

[9] Do you own any horses (including any mafisad out) Yes--- No---
If yes, please provide the following information.

	Age			
			June 1985	June 1984
	<1 yr	>1 yr	Total	Total
Current Inventory June 1,1985 of each age				
- males	____	____	____	____
- females	____	____	____	____
Animals Acquired (June 1/84--May 31/85)				
- Purchased or traded	____	____	____	____
- From whom purchased	____	____	____	____
- Where purchased	____	____	____	____
- Purchase price	____	____	____	____
- Gift received or bohali	____	____	____	____
Animal Leaving (June 1/84--May 31/85)				
- Died	____	____	____	____
- Gift or bohali	____	____	____	____
- Traded or sold	____	____	____	____
- To whom sold	____	____	____	____
- Where sold	____	____	____	____
- Sales price	____	____	____	____
- Butchered	____	____	____	____
- Stolen	____	____	____	____
Inventory June 1/84	____	____	____	____ Total 1983

[10] Do you own any donkeys (including any mafisad out) Yes--- No---
If yes, please provide the following information.

	Age			
	<1 yr	>1 yr	June 1985 Total	June 1984 Total
Current Inventory June 1,1985 of each age				
- males	____	____	____	____
- females	____	____	____	____
Animals Acquired (June 1/84--May 31/85)				
- Purchased or traded	____	____	____	____
- From whom purchased	____	____	____	____
- Where purchased	____	____	____	____
- Purchase price	____	____	____	____
- Gift received or bohali	____	____	____	____
Animal Leaving (June 1/84--May 31/85)				
- Died	____	____	____	____
- Gift or bohali	____	____	____	____
- Traded or sold	____	____	____	____
- To whom sold	____	____	____	____
- Where sold	____	____	____	____
- Sales price	____	____	____	____
- Butchered	____	____	____	____
- Stolen	____	____	____	____
Inventory June 1/84	____	____	____	____ Total 1983

[11] REPRODUCTION DATA

Think about the cow that you now own that has had the most calves.....

How many calves has this cow had in her liftime?_____

What is the age of this cow now?_____

Has this cow ever been used for draft? Yes_____ No_____

What is the age of the youngest cow that you now own that has had a calf_____

At what age do your cows usually have their first calf_____

At what age do your sheep usually have their first lamb_____

At what age do your goats usually have their first kid_____

SURVEY PART III: LIVESTOCK PRODUCTS TRANSACTIONS

[1] SALE OF WOOL

If the household has sheep (owned and/or mafisad in) request the following information on the sale of wool

1.1 Number of sheep in herd _____ owned and kept
_____ mafisad in

1.2 Information on clipping during the last year (June 1, 1984 - May 31, 1985)

	Date	Number Clipped	[1] Place Clipped
First Clip	____	____	____
Second Clip	____	____	____

Codes [1] Place
1 Home
2 LPMS woolshed
3 Other government woolshed
4 Private woolshed
5 Other, Specify _____

1.3 Information on Wool Sales (31 May 1984 -- 1 June 1985)

(Ask to see receipts) Sales	Classes	Purchaser Name	[2] Type	Place	Date	Weight	Payment for wool sales: Initial Date	Initial Amount	Final Date	Final Amount

Codes [2]
1 LPMS woolshed
2 Private licensed trader
3 Private unlicensed trader
4 Other - Specify

1.4 Do any of the buyers provide credit against wool and/or mohair payments

	Yes	No	Interest Charged	Terms
Private Licensed	___	___	_____	_____
Private Unlicensed	___	___	_____	_____

1.5 Were any of the sheep not clipped

_____ Yes
_____ No

If yes, ask why not clipped? _____
_____
_____

2] SALE OF MOHAIR

If the household has goats (owned and/or mafisad in) request the following information on the sale of mohair

2.1 Number of goats in herd _____ owned and kept
_____ mafisad in

2.2 Information on clipping during the last year (June 1, 1984 - May 31, 1985)

	Date	Number Clipped	[1] Place Clipped
First Clip	____	____	____
Second Clip	____	____	____

Codes [1] Place
1 Home
2 LPMS woolshed
3 Other government woolshed
4 Private woolshed
5 Other, Specify _____

2.3 Information on Mohair Sales (31 May 1984 -- 1 June 1985)

(Ask to see receipts		Purchaser				Payment for wool sales			
			[2]			Initial		Final	
Sales	Classes	Name	Type	Place	Date	Weight	Date	Amount	Date	Amount

Codes [2]
1 LPMS woolshed
2 Private licensed trader
3 Private unlicensed trader
4 Other - Specify

2.4 Were any of the goats not clipped
_____ yes
_____ no

If yes, ask the reasons _____
_____
_____
_____

[3] REASONS FOR SELLING AND NOT SELLING TO ALTERNATIVE MARKET OUTLETS

3.1 Rank the three most important reasons (if any) for you selling to any of the marketing agents. (1=most important) (don't prompt)

LPMS	Private Licensed Trader	Private Unlicensed Trader	
____	_____	_____	only available purchaser
____	_____	_____	closest market outlet
____	_____	_____	buyer gives highest total payment
____	_____	_____	buyer gives highest initial payment
____	_____	_____	buyer pays most promptly
____	_____	_____	buyer gives best grades
____	_____	_____	buyer accepts wool from a small number of sheep or goats
____	_____	_____	buyer provides credit on final pay
____	_____	_____	buyer pays in cash
____	_____	_____	Others - Specify _____
____	_____	_____	_____
____	_____	_____	_____

3.2 Rank the three most important reasons (if any) for you not selling to any of the marketing agents. (1=most important) (don't prompt)

LPMS	Private Licensed Trader	Private Unlicensed Trader	
____	_____	_____	charge too high commissions
____	_____	_____	are unreliable/untrustworthy
____	_____	_____	give low grades
____	_____	_____	pay too slowly
____	_____	_____	pay too low
____	_____	_____	buyer does not pay with cash
____	_____	_____	Other, Specify _____
____	_____	_____	_____
____	_____	_____	_____

[4] DISPOSAL OF PRODUCTS FROM SLAUGHTERED ANIMALS

4.1 If the household slaughtered, or had slaughtered, any animals in the previous year, complete the following tables

				[2]		[3]	[4]	[5]
							Reason for slaughter	
	Date	Type	Age	Owned or Purchased	Purchase Price	Condition	of AN animal	of THIS animal
Cattle 1	____	____	____	____	____	____	____	____
2	____	____	____	____	____	____	____	____
3	____	____	____	____	____	____	____	____
4	____	____	____	____	____	____	____	____
5	____	____	____	____	____	____	____	____
Sheep 1	____	____	____	____	____	____	____	____
2	____	____	____	____	____	____	____	____
3	____	____	____	____	____	____	____	____
4	____	____	____	____	____	____	____	____
5	____	____	____	____	____	____	____	____
Goats 1	____	____	____	____	____	____	____	____
2	____	____	____	____	____	____	____	____
3	____	____	____	____	____	____	____	____
4	____	____	____	____	____	____	____	____
5	____	____	____	____	____	____	____	____
Horse	____	____	____	____	____	____	____	____
Donkey	____	____	____	____	____	____	____	____

[2] Owned or Purchased
1 own animal
2 Purchased for slaughter from neighbour
3 Purchased for slaughter from RSA
4 Purchased for slaughter from feedlot
5 Purchased for slaughter from other, Specify _____

[3] Condition of Animal
1 Excellent - fat
2 Good
3 Fair
4 Poor
5 Emaciated
6 Dying from disease
7 Dying from starvation

[4] Reason for Slaughter of AN Animal
1 Home consumption
2 Funeral
3 Welcome baby
4 Initiation
5 Wedding
6 Sale of Products
7 Bolimo (Ancestral Offering)
8 Other - Specify

[5] Reason for slaughter of THIS animal
1 Fattened for slaughter
2 Best available animal
3 Infertile
4 Culled for poor condition
5 Dying from old age
6 Dying from disease
7 Other, specify

	Hides and skins From slaughtered animals [6] Type of Curing	[7] Disposal	Value	Meat and offal From slaughtered animals Was meat sold Yes/No	Were offals sold Yes/No
Cattle 1	____	____	____	____	____
2	____	____	____	____	____
3	____	____	____	____	____
4	____	____	____	____	____
5	____	____	____	____	____
Sheep 1	____	____	____	____	____
2	____	____	____	____	____
3	____	____	____	____	____
4	____	____	____	____	____
5	____	____	____	____	____
Goats 1	____	____	____	____	____
2	____	____	____	____	____
3	____	____	____	____	____
4	____	____	____	____	____
5	____	____	____	____	____
Horse	____	____	____	____	____
Donkey	____	____	____	____	____

[6] Disposal of Hides and Skins
1 Sold in village
2 Sold on streets or road
3 Sold to LPMS
4 Sold to private trader
5 Kept for clothing
6 Kept for bedding
7 Kept for other purposes
Specify_____

[7] Type of Curing
1 Sun-dried
2 Shade-dried
3 Dry salted
4 Wet salted or sold green
5 Not cured

4.2 Was meat from any of the slaughtered animals sold?

_____ yes

_____ no

If yes, describe for each species the cuts sold

	Cuts Sold	Weight of Cut	Price Charged for Cut	Price Charged per Kg
Cattle				
	---	---	---	---
	---	---	---	---
	---	---	---	---
Sheep				
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
Goats				
	---	---	---	---
	---	---	---	---
	---	---	---	---
Horses & Donkeys				
	_____	_____	_____	_____
	_____	_____	_____	_____

4.3 Were offals from any of the slaughtered animals sold?

_____ yes
_____ no

If yes, describe for each species the offals sold

	Offals Sold	Weight of Offal	Price Charged for Offal	Price Charged per Kg
Cattle				
	---	---	---	---
	---	---	---	---
	---	---	---	---
Sheep				
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
Goats				
	---	---	---	---
	---	---	---	---
	---	---	---	---
Horses & Donkeys				
	_____	_____	_____	_____
	_____	_____	_____	_____

[5] DISPOSAL OF PRODUCTS FROM FALLEN ANIMALS

If the household had any animals which died of natural causes during the previous year, complete the following table

	Death of the animal					Disposal of products			
	Date	Type	Age	[2] Reason for Death	[3] Location at death	[4] Meat	[4] Offal	[5] Disposal of hide or skin	[6] Curing of Hide or Skin
Cattle 1	___	___	___	___	___	___	___	___	___
2	___	___	___	___	___	___	___	___	___
3	___	___	___	___	___	___	___	___	___
4	___	___	___	___	___	___	___	___	___
5	___	___	___	___	___	___	___	___	___
Sheep 1	___	___	___	___	___	___	___	___	___
2	___	___	___	___	___	___	___	___	___
3	___	___	___	___	___	___	___	___	___
4	___	___	___	___	___	___	___	___	___
5	___	___	___	___	___	___	___	___	___
Goats 1	___	___	___	___	___	___	___	___	___
2	___	___	___	___	___	___	___	___	___
3	___	___	___	___	___	___	___	___	___
4	___	___	___	___	___	___	___	___	___
5	___	___	___	___	___	___	___	___	___
Horse	___	___	___	___	___	___	___	___	___
Donkey	___	___	___	___	___	___	___	___	___

Codes

[2] Reason for Death
1 Old age
2 Starvation
3 Drought
4 Lightening
5 Disease
6 Bluetongue
7 Anthrax
8 Drowning
9 Bloat
10 Dystocia (difficulty giving birth)
11 Foot and mouth
12 Rabies
13 Blackleg
14 Mange
15 Don't know

[3] Location at death
1 Village area
2 Summer grazing area
3 Trekking to/from summer grazing area

[4] Disposal of products
1 Eaten by HH members
2 Eaten by HH members, relatives & friends
3 Sold in village area
4 Eaten by shepherds at cattle post
5 Fed to dogs
6 Sold outside of village
7 Thrown away

[5] Disposal of Hides and Skins
1 Thrown away
2 Sold on streets and roads
3 Sold in village
4 Sold to LPMS
5 Sold to private trader
6 Kept for clothing
7 Kept for bedding
8 Kept for other reasons
Specify_____

[6] Curing of hides & skins
1 Sun-dried
2 Shade-dried
3 Dry salted
4 Wet salted
5 Not cured

[6] PRODUCTION, CONSUMPTION AND SALE OF MILK

6.1 Have you milked any cows in the last year? If so, please provide the following information for each cow milked

	Cow	Age	[1] Breed	Month Started Milking	Month Ended Milking	Av. Amount Collected Per Day
1	___	___	____	____	____	____
2	___	___	____	____	____	____
3	___	___	____	____	____	____
4	___	___	____	____	____	____
5	___	___	____	____	____	____

[1] Breed Code
1 Holstein Friessen
2 Brown Swiss
3 Jersey
4 Drakensberg
5 Mixed Breed
6 Don't know

6.2 Have you sold any milk in the last year? ____ yes ____ no

If yes, ask the following information
i) Volume per sale _____
ii) Frequency of sale _____
iii) Period of sales _____ to _____
iv) Price per volume _____
v) Purchaser [2] _____

[2] Milk Purchaser
1 Friend/neighbour
2 Dairy processing plant
3 Local cafe
4 Clinic/hospital
5 Other institution
6 Other, specify _____

6.3 Did you purchase any milk in the last year? ____ yes ____ no

If yes, request the following information
i) volume per purchase _____
ii) frequency of purchases _____
iii) price per volume _____
iv) seller [3] _____

[3] Milk Seller
1 Friend/neighbour
2 Local cafe
3 Supermarket
4 Other - Specify _____

6.4 What volume of milk does your family normally consume per day
_____

6.5 Do you own and milk any animals of improved dairy breeds?
____ yes
____ no

If yes, request
i) Breed
_____ Freissen
_____ Brown Swiss
_____ Jersey
ii) How purchased
_____ purchased locally
_____ purchased privately in South Africa
_____ purchased with Ministry of Agriculture assistance
_____ other - specify _____

iii) Purchase-price
- date _____
- age _____
- condition _____

[7] USE OF ANIMALS FOR DRAUGHT

7.1 Did you use animals for draft purposes in the last year?
____ yes
____ no

If yes, list the following information for each animal

Draft Animal	Type [1]	Age	Ownership	
			Owner	What arrangement
1				
2				
3				
4				
5				
6				

[1] Type Codes

1. Oxen
2. Bull
3. Cow
4. Horse
5. Donkey
6. Mule

7.2 If the respondent answered yes to 7.1, please obtain the following information regarding the use of draft animals on own or others' land

	Own Land		Other's Land		
	[1] Type of Team	Number of Days	[1] Type of Team	Number of Days	Charge per Day
Land Preparation					
Planting					
Cultivation					
Harvest					
Transportation of Goods					
Other - Specify					

[1] Type of Team Codes

1. 6 cattle team
2. 4 cattle team
3. 2 cattle team
4. single ox/cow/bull
5. 2 horse team
6. single horse team

7.3 Does the condition of draft animals ever delay agricultural operations?

_____ yes
_____ no

If yes - why were the animals in poor condition _____
_____
- what do they suggest as a remedy? _____
_____

Which operations are delayed and for how long?

Operation	Delay
Land Preparation	_____
Planting	_____
Cultivation	_____
Harvest	_____

7.4 Is the lack of draft animals a factor which hinders agricultural production of you or others in this village?

	Your Production	Others in Village
yes	_____	_____
no	_____	_____

If yes, explain _____
_____

7.5 If you had any farm operations performed by tractor and tractor drawn equipment,

	Yes	No	Why
i) Were you satisfied with the - price	___	___	_____
- results	___	___	_____

ii) Was the Food for Self/Sufficiency Programme (T.O.U.) involved?

_____ yes _____ no

iii) Will you hire a tractor again?

_____ yes _____ no

why _____

iv) Ownership of tractor

_____ self _____ Masotho contractor
_____ government including T.O.U.
_____ R.S.A. contractor

SURVEY PART IV INPUTS INTO LIVESTOCK PRODUCTION

[1] HERDING LABOUR

1.1 Individuals involved in Herding Household Animals

				Total Payment						Sharing Arrangement (Include No. of household sharing
Name	Age	Sex	[1] Relation to Head	Food	Clothing	Live-stock	Cash	Date Started	Date Finished	Where

[1] Herder Relationship Codes
1 Child of household/spouse
2 Sibling of head/spouse
3 Household Head
4 Other relationship of head/spouse
5 No relation to Head

1.2 Are there any problems employing shepards?

Yes	No	
___	___	No shepards to hire
___	___	Shepards too costly
___	___	Shepards not responsible
___	___	Other - Specify _____

[2] FODDER AND SUPPLEMENTAL FEEDS

2.1 Are any of the livestock given fodder?

_____ yes
_____ no

If yes, detail the following information

	Type of Fodder	Number fed Total	Dry lot	Village Grazed All Year	Frequency of feeding	Amount per feeding	Period Fed	[1] Source	Price
Oxen	_____	_____	_____	_____	_____	_____	_____	_____	_____
Bulls	_____	_____	_____	_____	_____	_____	_____	_____	_____
Lactating Cows	_____	_____	_____	_____	_____	_____	_____	_____	_____
Other cattle	_____	_____	_____	_____	_____	_____	_____	_____	_____
Horses	_____	_____	_____	_____	_____	_____	_____	_____	_____
Donkeys	_____	_____	_____	_____	_____	_____	_____	_____	_____
Sheep/ Goats	_____	_____	_____	_____	_____	_____	_____	_____	_____

[1] Source of Fodder

1 Same village
2 Nearby village
3. Other - Specify
4. Own production

2.2 If any fodder was grown, ask:

	Acerage (Specify area unit)	Amount Sold	Selling Price	[1] Where Sold
Barley	_____	_____	_____	_____
Teff	_____	_____	_____	_____
Oats	_____	_____	_____	_____
Eragrostis Curvula	_____	_____	_____	_____
Lucerne	_____	_____	_____	_____
Other Field Fodder	_____	_____	_____	_____

[1] Where sold Code

1 Same village
2 Nearby village
3 Other - Specify

2.3 Were any feed supplements given?

Supplement	Quantity
Ruminate Block	_____
Salt	_____
Bone Meal	_____
Molasses	_____
Dairy Meal	_____
Bran	_____
Other - Specify	
_____	_____

[3] OTHER LIVESTOCK PRODUCTION INPUTS

3.1 Were any medicines given to any of the stock?

_____ yes
_____ no

If yes, obtain the following information:

Condition Treated	Were Medicines Used Yes/No	Type and No. of Animals	Person Administered by	Cost of Treatment per type of animal of Animal

3.2 Were any improved breeding animals or artificial insemination used?

_____ yes
_____ no

If yes, obtain the following information:

Breeding Animal	Breed	[1] Ownership	Place Obtained	Purchase Price	Rental Price	Reason
Bull	_____	_____	_____	_____	_____	_____
Ram	_____	_____	_____	_____	_____	_____
Billy	_____	_____	_____	_____	_____	_____
Artifical Insemination	_____	_____	_____	_____	_____	_____

[1] Ownership Codes
1 Own
2 Borrowed
3 Rented

3.3 Was any assistance received from:

	Yes	No
Livestock specialists of Ministry of Agriculture	___	___
Livestock assistants of Ministry of Agriculture	___	___
Project personnel	___	___

If yes, what kind of assistance

_____
_____
_____
_____

3.4 What number of animals were given vaccinations for:

	Cattle	Sheep	Goats	Horses	Mules
Bluetongue	_____	_____	_____	_____	_____
Black Quarter	_____	_____	_____	_____	_____
Others - Specify	_____	_____	_____	_____	_____

3.5 Request the following information on dipping

		First Dipping	Second Dipping
Sheep -	Date		
	Number		
	Place		
Goats -	Date		
	Number		
	Place		

[4] GRAZING

4.1 Are any of the animals kept in drylot or in village grazing land throughout the year?

Yes	No	
____	____	Drylot
____	____	Village grazing

Number of Animals	Drylot or Village	[1] Type of Animal	Reason

[1] Type of Animals

1 Oxen	7 Sheep, female	13 Horse, stud
2 Bull	8 Sheep, male	14 Horse, gelding
3 Cow	9 Lamb	15 Horse, mare
4 Heifer	10 Billy Goat	16 Horse, foal
5 Calf	11 Goat, female	17 Donkey
6 Ram	12 Goat, male	18 Mule

4.2 Summer and Winter Grazing Locations

			(for summer range only)			Kraal		Shepard Hut	
		Travel Time	Number of Animals	Date Departed Village	Date Returned Village	Own	Share	Own	Share
Summer Range	Cattle	_____	_____	_____	_____	___	___	___	___
	Sheep and/or Goats	_____	_____	_____	_____	___	___	___	___
Winter Range	Cattle	_____	_____	**	**	___	___	___	___
	Sheep and/or Goats	_____	_____	**	**	___	___	___	___
Village Area	Cattle	**	_____	**	**	___	___	**	**
	Sheep and /or Goats	**	_____	**	**	___	___	**	**

4.3 Do your animals receive adequate grazing from:

	Yes	No
Summer range	____	____
Winter range	____	____
Winter village fields	____	____

4.4 Are there grazing problems in any of the following three locations?

Location	Yes	No	Problem	Solution
Local Village Area	___	___	_____	_____
Summer Range	___	___	_____	_____
Winter Range	___	___	_____	_____

[5] PRODUCTION CONSTRAINTS

Please rank the three most important factors which limit the number of animals you have and the amount of products produced by these animals

	Factor	Rank
1	Inadequate funds to purchase animals	_____
2	Inadequate funds to purchase other inputs	_____
3	Family labour	_____
4	Local herding labour	_____
5	Expense of herding labour	_____
6	Management	_____
7	Availability of winter fodder	_____
8	Expense of winter fodder	_____
9	Winter grazing around village	_____
10	Winter cattle post grazing	_____
11	Summer grazing around village	_____
12	Summer cattle post grazing	_____
13	Overstocking	_____
14	Drought	_____
15	Sheet erosion	_____
16	Donga erosion	_____
17	Other - Specify	_____

[6] HYPOTHETICAL CATTLE SALE

6.1 If you were to sell one of your cattle in the near future what would the following characteristics be?

_____ Type

_____ Age

_____ Weight

_____ Expected price

_____ Likely buyer

6.2 How did you arrive at this price expectation? _____

_____

_____

[7] What are the most important reasons for owning female cattle, oxen, bulls, sheep, goats, horses and donkeys?

	Female Cattle	Oxen	Bulls	Sheep	Goats	Horses & Donkeys
1st most important						
2nd most important						
3rd most important						
4th most important						

SURVEY PART V NON-LIVESTOCK FARM CHARACTERISTICS

[1] INVENTORY OF HOUSEHOLD LAND (exclude gardens but include fields growing vegetables)

		Most recent Crop	
Field	Parcel	Winter	Summer
1	1		
	2		
	3		
2	1		
	2		
	3		
3	1		
	2		
	3		
4	1		
	2		
	3		

[2] SHARECROPPING

How many fields did the household:

No. of Fields

- sharecrop of own land this past year _____

- sharecrop other land this past year _____

SURVEY PART VI BOHALI

[1] Please provide the following information about bohali payments which the household has been involved in

Year	Involved as Giver or Receiver	[1] Relationship of Household Head to Bride or Groom	Total Payment Live-stock	Total Payment Cash	Household Head Share of Total Live-stock	Household Head Share of Total Cash	Initial Payment	Payment of Balance

[1] Relationship of Household Head to Bride or Groom Code

1 Bride
2 Groom
3 Father of Bride
4 Father of Groom
5 Brother of Bride
6 Brother of Groom
7 Uncle of Bride
8 Uncle of Groom
9 Other relative of Bride/Groom
10 No Relative

[2] Rank in order the most preferable forms of giving and receiving bohali payments

	Giving	Receiving
Sheep	_____	_____
Goats	_____	_____
Oxen (young/old)	_____	_____
Donkeys	_____	_____
Cows (young/old)	_____	_____
Horses	_____	_____
Bulls (young/old)	_____	_____
Cash	_____	_____

Other - Specify _____

[3] If you were to be involved in a bohali payment in the near future, what number of each of the following would you prefer to 1 cow?

Bohali Form	Numbers
Sheep	_____
Goats	_____
Oxen	_____
Bulls	_____
Horses	_____
Mules	_____
Money	_____

[4] Is the form of bohali payments changing over time?

_____ yes
_____ no

If yes, what forms are becoming more or less important, and why?

_____
_____

[5] Is the amount of bohali payments increasing or decreasing over time?

_____ increasing
_____ decreasing
_____ about the same

Why? _____
_____
_____

SURVEY PART VII MAFISA

[1] If the household was herding any sheep last year on mafisa loan from another household ask:

	Yes	No
i) Were the sheep clipped	_____	_____

ii) Who received the proceeds

_____ owner of the sheep
_____ keeper of the sheep
_____ proceeds shared between owner and keeper

What proportions to owner _____
keeper _____

[2] If the household was herding any goats last year on mafisa loan ask:

	Yes	No
i) Were the goats clipped	____	____

ii) If yes, who received the proceeds from the moahir?

_____ owner
_____ keeper
_____ proceeds shared between owner and keeper

What proportions to owner _____
keeper _____

[3] If the household was herding any bulls or oxen last year on mafisa loan, ask:

i) Were the animals used for draft purposes by owner?

_____ yes
_____ no

ii) Were the animals used for draft purposes by the household keeping the animals?

_____ yes
_____ no

[4] If the household was herding any cows, ewes, or nannies last year on mafisa loan, ask:

i) Were any calves, lambs or kids born to the mafisa'd animals

____ yes
____ no

ii) If yes, who received progeny?

	Calves	Lambs	Kids
Owner			
Keeper			
Progeny shared between owner and keeper			

[5] What is the most important reason for mafisa'ing animals out? (Don't prompt)

	Cattle	Sheep	Goats
Helping Others			
Gain access to grazing			
Gain access to better management			
Gain access to herding labour			
Gain access to cattle post			
Too few animals to herd			
Other, Specify			

[6] What is the most important reason for mafisa'ing animals in? (Don't prompt)

	Cattle	Sheep	Goats
Helping Others			
Gain income from animal products			
Gain draft power			
Gain milking			
Reduce herding costs			
Other - Specify			

SURVEY PART VIII - FINANCIAL ASPECTS

[1] BANK ACCOUNTS

1.1 Does the household head or spouse have an account with any bank?

_____ yes
_____ no

If yes, describe the account

Name of Institution	[1] Type of Account	Location Lesotho or South Africa	Town	Interest Rate Paid (%)

Codes [1] Type of Account Code
1 Current (Personal Chequing) Account
2 Savings Deposit
3 Time Deposit
4 Other - Specify

1.2 If the household has an account in South Africa, ask the reasons:

_____ Higher rate of interest paid
_____ Closer to work
_____ More convenient than in Lesotho
_____ More trustworthy than in Lesotho
_____ Other - Specify_____

[2] CREDIT UNIONS

2.1 Do you have nay money saved with a local credit union?

_____ yes
_____ no

If yes, what rate of interest is paid on savings deposits?

_____

2.2 Do you have money borrowed from a local credit union?

_____ yes
_____ no

If yes, what rate of interest is paid on the borrowed funds? _____

[3] ATTITUDES TOWARDS SAVINGS AND CASH REQUIREMENTS

3.1 If the household has extra cash funds available, how can they best be saved or invested? (Don't prompt)

_____ commercial bank
_____ local credit union
_____ other savings bank
_____ building house
_____ building a cafe or shop
_____ purchase of a non-farm productive asset
Specify _____
_____ purchase of a non-livestock farm asset
Specify _____

Purchase livestock. Describe the following detail

i) Species _____
ii) Sex _____
iii) Age _____
iv) Dairy/non dairy _____

Other - Specify _____

3.2 Did you sell or trade livestock for equipment, building materials or other goods or did you trade or sell these items for livestock?

_____ yes
_____ no

If yes,

i) What species, type and age of animal
_____

ii) What type of transaction
_____

iii) What would be the cash equivalent
_____

3.3 In the last year, which of the following expenses did the household incur, and how was the expense met?

Expense	Incurred		Regular Income	Savi-ngs	Borrow	Sell		
	Yes	No				Live-stock	Grain	Non-Agri Product
Hospital and Medical	___	___	___	___	___	___	___	___
Funeral	___	___	___	___	___	___	___	___
School Fees	___	___	___	___	___	___	___	___
Livestock	___	___	___	___	___	___	___	___
Other emergency	___	___	___	___	___	___	___	___

[4] ATTITUDES TOWARDS RISK AND SECURITY

Of the following enterprises, please rank the three most risky and the three most secure (Risk refers to high chance of failure or loss. Secure refers to low chance of failure or loss)

	[1] Most Risky	[2] Most Secure
Maize production		
Sorghum production		
Wheat production		
Bean or pea production		
Commercial vegetable production		
Fodder production		
Goat rearing		
Sheep rearing		
Dairy production		
General cattle production		
Poultry production		
Own and operate taxi		
Own and operate cafe or shop		

Codes [1]	[2]
1. Most risky	a. Most secure
2. 2nd most risky	b. 2nd most secure
3. 3rd most risky	c. 3rd most secure

SURVEY PART IX USE OF DUNG

Instructions to Enumerator: This portion of the questionnaire should be completed with information supplied by the leading female in the household. If this person was questioned in the previous parts, continue. Otherwise thank the male respondant and ask to see the appropriate female member of the household.

[1] DUNG FUELS

1.1 Record dung used for fuel which is normally used, exact amounts used last week, and details on the way each type of dung fuel is collected or purchased

Type of	Check if Used	Amount Used Last Week	If Collected Times per Week
Lisu			
Mapharoa			
Khapane			
Bokuluba			

1.2 How many times per week are basins or bags of khapane and/or bokuluba collected in:

i) Spring _____
ii) Summer _____
iii) Autumn _____
iv) Winter _____

1.3 Do you ever buy or sell dung fuels?

	Yes	No
Buy	___	___
Sell	___	___

If yes, what price is received or paid for what weight or volume?

_____ Lisu
_____ Mapharoa
_____ Khapane
_____ Bokuluba

[2] USE OF DUNG FOR SMEARING FLOORS AND PLASTERING WALLS

Do you ever smear the floors or plaster the walls of your house(s) with dung or mud and dung?

_____ yes
_____ no

If yes, obtain the following information

	No of House Floors Smeared	Frequency of Smearing	Amount of Dung Used each Time
Summer			
Winter			

	No of Houses with Walls Plastered	Frequence of Plastering	Amount of Dung Used each Time
Summer			
Winter			

[3] OTHER USES OF DUNG

What else did the household use dung for in the past year?_____

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